Preventing COVID-19 as a nursing student through social networks in their family-social environment

Previniendo el COVID-19 como estudiante de enfermería mediante redes sociales en su entorno familiar-social Prevenindo a COVID-19 como estudante de enfermagem por meio de redes sociais em seu ambiente familiar-social

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ABSTRACT

Objective: to analyze and understand COVID-19 prevention by nursing students through social networks in their family-social environment. **Method:** a qualitative descriptive-interpretative study, developed in the nursing school of a public university in Lima, Peru, from October to December 2020. Students from the fourth and fifth year of studies participated. Data were collected with the technique of focus groups (2) and analyzed with thematic content analysis. **Results:** two categories emerged: Using various social networks in times of pandemic; Considering themselves trained for COVID-19 prevention through social networks in their family-social circle. **Final considerations:** nursing students carry out COVID-19 prevention in their family-social circle through social networks, showing satisfaction in the transmission of knowledge, considering the people's physical-emotional condition and local health status, perceiving themselves as agents of change, seeking people empowerment.

Descriptors: Student; Nursing; COVID-19; Social Networks; Prevention.

RESUMEN

Objetivo: analizar y comprender la prevención del COVID-19 por las estudiantes de enfermería mediante redes sociales en su entorno familiar-social. **Método:** estudio cualitativo descriptivo-interpretativo, desarrollada en la escuela de enfermería de una universidad pública en Lima-Perú, de octubre a diciembre del 2020. Participaron estudiantes del cuarto y quinto año de estudios, se recolectaron los datos con la técnica de grupos focales (2) y se analizaron con el análisis de contenido temático. **Resultados:** emergieron 2 categorías: *Utilizando diversas redes sociales en tiempos de pandemia;* Considerándose capacitadas para la prevención del COVID-19 por redes sociales en su círculo familiar-social. **Consideraciones finales:** las estudiantes de enfermería realizan la prevención del COVID-19 en su círculo familiar-social mediante redes sociales, mostrando satisfacción en la transmisión de conocimientos, considerando la condición física-emocional de las personas y el estado sanitario local, percibiéndose como agentes de cambio, procurando el empoderamiento de las personas.

Descriptores: Estudiante; Enfermería; COVID-19; Redes Sociales; Prevención.

RESUMO

Objetivo: analisar e compreender a prevenção da COVID-19 por estudantes de enfermagem por meio das redes sociais em seu ambiente familiar-social. **Método:** estudo qualitativo descritivo-interpretativo, desenvolvido na escola de enfermagem de uma universidade pública em Lima-Peru, de outubro a dezembro de 2020. Participaram alunos do quarto e quinto ano de estudos. Os dados foram coletados com a técnica de grupos focais (2) e analisados com análise de conteúdo temática. **Resultados:** emergiram duas categorias: Utilizando diversas redes sociais em tempos de pandemia; Considerando-se capacitados para a prevenção da COVID-19 por meio das redes sociais em seu círculo familiar-social. **Considerações finais:** os acadêmicos de enfermagem realizam a prevenção da COVID-19 em seu círculo familiar-social por meio das redes sociais, demonstrando satisfação na transmissão do conhecimento, considerando a condição físico-emocional das pessoas e o estado de saúde local, percebendo-se como agentes de mudança, buscando o empoderamento das pessoas. **Descritores:** Estudante; Enfermagem; COVID-19; Redes Sociais; Prevenção.

INTRODUCTION

Since February 2020, COVID-19 infections have been considered by the World Health Organization (WHO) as a global public health emergency. In several countries the second or third wave is developing and, in others, up to the fourth wave of infections, together with this, the new variants that are emerging generate uncertainty, fear and stress throughout the world. Vaccination has progressed in most countries, and in Peru, despite the fact that a National Vaccination Plan has been initiated with a territorial focus, the second wave is taking place, with the danger of a third wave; continuing the increasing cases, as of September 16, 2021 there are 2, 163,312 infected and 198,860 dead (1).

The deployment of social networks in recent years has been supported by the great technological development that took place at the beginning of the 21st century, modifying our way of communicating, exchanging information, etc. "Today, various forms of virtual social networks such as Facebook, Twitter, Instagram, etc., provide some of the most powerful forms of communication between people around the world" (2).

The emergence of the COVID-19 outbreak caught the attention of media, press, and social media news pages. However, "there has been a proliferation of sources and sites where information can be obtained, many from fake news, resulting in disinformation and difficulties in distinguishing between rumors and reality"(3). Therefore, professionals, health students, and the general public should consult sources that provide reliable information, such as: "Who providing multiple online training sessions and multilingual materials for information on COVID-19 prevention strategies"(4).

Studies have been carried out on the use of social networks in health issues that reach conclusions such as: "quick and free access to high-quality information from verifiable sources is valuable to optimize the global medical response to the crisis such as the current COVID-19 pandemic"(3). Another study found among Iranian medical students "a high level of knowledge related to COVID-19 and self-reported preventive behaviors and a moderate risk perception"(5).

However, in our environment there is no information on COVID-19 prevention carried out by health sciences students in general and nursing students in particular who, in developing countries, are a source of information for their families and communities. There is also no evidence of studies on the use of social networks by students to share information on preventive measures of COVID-19 in their social environment.

"The number of social media users is changing over time; it is important to understand whether the use of social media for health communication is also changing" (6). Moreover, it is necessary to investigate the participation of nursing students in the COVID-19 pandemic, since the essence of the profession in which they are being trained is the care of people's lives and health. Therefore, it was considered important to carry out a study considering the following research question: What is the involvement of nursing students in COVID-19 prevention through social media in their family and social environment during the pandemic?

OBJECTIVE

To analyze and understand COVID-19 prevention by nursing students through social networks in their family-social environment.

METHODS

Ethical aspects

The study was presented to the Ethics Committee of the Facultad de Medicina San Fernando of the Universidad Nacional Mayor de San Marcos (UNMSM) in Lima, Perú, obtaining its approval with Code 0035. At the beginning of the study, students were given detailed information about the objective and the research process. Likewise, informed consent was applied virtually, anonymity was maintained by giving them fictitious names (of nursing theorists and philosophers). Their autonomy was also respected, making them aware of their freedom to stop participating in research if they so decided; thus, respecting the ethical aspects in research with human beings.

Study design and theoretical-methodological framework

The descriptive-interpretative qualitative approach was used that emphasizes the characteristics, properties or facts of a certain phenomenon, in this case, COVID-19 prevention by nursing students through social networks in their family-social environment in times of pandemic. The study methodology was guided by COREQ. As a theoretical framework, the Life-Health paradigm was used, which considers the care of human beings, from conception to death, as the essence of nursing profession, with a life-health approach and not a health-disease approach. "Although the act of caring is inherent in human nature, nurses appropriate and take on care as the essence of their profession. From their conceptual framework, nurses conceive of caring as an act of life, in the sense that it implies a series of attitudes and activities aimed at preserving and maintaining life"(7).

Study setting

The study was conducted at the Nursing School of the Faculty of Medicine of UNMSM, in Lima, Peru. Due to the pandemic health status, teaching-learning is being developed virtually, so this pathway was also used for research.

Data sources and inclusion and exclusion criteria

Participants were 15 nursing students, who were selected for convenience and invited to participate in the research. The number of participants was established by data saturation. It was considered as inclusion criteria that they should be students of the fourth or fifth years, with regular enrollment and that their participation was voluntary. The exclusion criteria were that students be from years prior to the fourth year, that they have not taken professional courses and that they do not wish to participate in the study.

Data collection and organization

Data collection was carried out from October to December 2020. The virtual focus group technique was used, using Google Meet, by video call, previously coordinated with students, lasting 1:30 and 1:45 hours. Groups of 7 and 8 students were formed, the number of focus groups (2) was established by data saturation. Each focus group was immediately taxed to identify the information obtained; thus, when there was no different or novel information, data collection was stopped.

As an instrument, a focus group guide was used with the following guiding questions: which social networks do you use most often in this pandemic and what do you use them for? Do you consider that social networks are relevant in COVID-19 prevention in your family and social environment? What experiences (testimonials) could you give with the use of social networks in COVID-19 prevention among your family members and the closest social group? Students participated with great enthusiasm in the focus groups, referring their preventive experiences with the use of social networks in the pandemic, in their family-social environment, seeking to preserve life, health and also the empowerment of members of their closest circles in relation to knowledge and preventive measures to avoid this disease.

Data analysis

Data analysis was performed by thematic content analysis (8), which comprises the stages of pre-analysis, material exploration, and treatment of results. The data obtained in the focus groups were transcribed, then a text skimming was performed, then the data was organized, forming the units of analysis to establish the codes that later constituted the categories. When the categories were very extensive, the corresponding subcategories were established. Finally, this study aimed articulated with the empirical data, with the theoretical content addressed and the previous studies in relation to COVID-19.

RESULTS

After data analysis, two categories emerged: *Using various social networks in times of pandemic*, with 2 subcategories, and *Considering themselves trained for COVID-19 prevention by social networks in their family-social circle*, with four subcategories. They are described below.

Using various social networks in times of pandemic

Using Twitter, WhatsApp and Facebook more frequently for information and communication of preventive measures on COVID-19

Most participants consider Twitter as the most reliable and truthful social network, they refer that through this network they receive information from the Ministry of Health (MINSA), the WHO, and other organizations that inform the population about what is due and it should not be done in times of pandemic, as we verified in the following testimony:

Lastly, I am checking Twitter because that is where the MINSA publishes an infographic in which it shows a summary of the cases of contagion in Peru and the characteristics, and then I share it among my family and friends. (Anaximandro)

Likewise, students use WhatsApp to communicate with their family and social circle regarding COVID-19 prevention measures; they consider this social network as a quick and easy means of communication with their closest environment, since at the WHO level it is used in the Spanish version as a text and video messaging service. However, they do not advise its use in case of a greater number of people:

What I use the most is WhatsApp because it is of greater reach to my relatives, even in my community a WhatsApp group has been created at the block level, to share information about the pandemic, and as a community prevention measures. (Watson)

I use WhatsApp, but with the closest environment, but if I wanted to reach a greater number of people then I would not consider it much. (Leininger)

Also, most students reported that Facebook is for personal, family and friendly use and as a means of information about COVID-19 and courses as a facilitator for obtaining current information on symptoms and treatments of this disease:

I use the social network Facebook mainly the pages of EsSalud and the Ministry of Health, where they publish courses on how we must adapt to the new regulations and the reality of the COVID-19 pandemic. There are webinars, free courses or infographics that are related to COVID-19 prevention. (Callista Roy)

Using Instagram and YouTube to a lesser extent for information and dissemination of preventive measures on COVID-19

Students use Instagram less frequently to obtain information about the pandemic, seeking written and video information. They stated that they use it to follow recognized people in the field of health, investigate and then share:

[...] the State has several pages on both Facebook and Instagram. Basically, it is to see how the statistical data is going and both Facebook and Instagram are sending information and what I do is share information about this latest news. (Evelyn Adam)

There were few students who expressed the use of other social networks such as YouTube and Pinterest to search for audiovisual information on COVID-19, where they find guidance in videos on health and more in times of pandemic.

YouTube has audiovisual information for 1 or 1:30 hours, practically like a recorded class and important official information on how to prevent COVID-19. Sometimes Pinterest is similar to Instagram and I like it because there is information about the pandemic. (Ann Marriner)

Considering themselves trained for COVID-19 prevention through social networks in their family-social circle

Communicating valid and reliable scientific evidence on COVID-19 through social networks in their family and social environment

Those investigated reported that, because they are nursing students, they have greater capacity and knowledge than the general population to discern between the correct or incorrect information that is transmitted about COVID-19 through social networks, which often generates confusion and panic. They affirm that by training in the field of health they have already developed critical and analytical thinking about all the information before communicating it to their relatives and close friends, always differentiating true from false information:

When studying a health career, we have a little more knowledge about what is happening, but sometimes we see many pages that are directed at the population that distort this information, causing the population to become alarmed. (Kant)

[...] the use of social networks in the prevention of diseases, such as COVID-19, is pertinent, since it reaches our families and our closest environment more quickly. However, as nursing students we have to know how to differentiate if the information is true or false. (Watson)

Participants affirm that it is important that as nursing students they must disclose and verify the sources of information to assess the news reliability, so they feel responsible for sharing pages, product of research, in such a way that it helps the population to be better informed:

It depends on us students and also on professionals who share information from reliable pages that, when analyzing the information, when reading research articles, let's really know that the information is true and thus more information is provided, which really helps to manage COVID-19. (Anaximandro)

Considering themselves as agents of change by transmitting preventive measures through social networks

Students stated that they have a good opportunity, in this COVID-19 pandemic, to spread information for the prevention of this disease through social networks, considering not only the physical aspect but also the emotional aspect of people, taking into account the country's social reality, also the population's level of knowledge and its health practices, which leads them to consider themselves as agents of change:

Social networks constitute a fairly large opportunity as nursing students who have first-hand information and the ability to discern true information from false information, for which we are agents of change. (Kari Martinsen)

[...] not all the information refers to physical appearance, but also to the emotional and nutritional management that people should have at this time. (Leininger)

We must also take into account the social reality of our country, the level of knowledge and the practices that. (Kari Martinsen) For those investigated, we find ourselves in a digital age in which the information is on the cell phone, on a computer and can reach many places, regardless of social or economic status and that social sensitivity is needed to be agents of change and to be able to adequately transmit information on COVID-19 prevention:

[...] we must be sensitive and aware of the importance we have as agents of change and how we can use social networks in favor of health and how to manage this information. (Kari Martinsen)

Reassessing nursing students' educational role

Participants reported that, due to their training during their community internships, they were properly prepared to conduct educational sessions online and that they have the necessary experience to prepare educational material, such as infographics, which they used in the educational sessions. Students consider themselves trained and take it as a responsibility to "equip the population with tools", seeking their empowerment to preserve their lives and health, being well informed about COVID-19:

During our training we learn to carry out educational sessions in which we use different materials, such as infographics. (Martha Roger)

Part of our work as students is to be able to "provide the general population with tools" on how to discern this real information from the information that is alarmist, thus being agents of change. (Kari Martinsen)

Working multidisciplinary as students in COVID-19 prevention

A nursing student stated that she is working with health professionals, planning the creation of an anti-COVID-19 brigade, including community leaders to attend to people who are neglected in this health crisis, since in their community there were deaths from this cause. Another student highlighted the multidisciplinary teamwork that she is developing with students from other health professions, where her product for the anti-COVID-19 brigade was more enriching due to the diversity of knowledge in each subject:

We created an anti-COVID-19 brigade, since within my environment there are not only doctors, but also a dentist and myself, a nursing student. We will meet with the leader of our community in order to promote what would be preventive measures against COVID-19. (Madeleine)

[...] at the beginning of the quarantine, we formed an anti-COVID-19 commission, which was made up of a medical student, another from pharmacy, another from chemistry, and myself. It's enriching. (Martha Roger)

DISCUSSION

The study made it possible to know the social networks that nursing students use most frequently and how they use them for COVID-19 prevention. These students are within the age group of adolescents (late stage) and young adults, who have the highest

rates of social media use of any age group. "Social networks enable users to create, share, and exchange information and ideas on virtual networks and have the potential to revolutionize health care in a variety of ways" (9). Based on this pandemic, the training and participation of students in health sciences in general and nursing sciences in particular must be in accordance with the context in which they are immersed, for which health care must be modified, seeking the rapid information of people, making use of social networks.

The data showed that nursing students use different social networks such as Twitter, WhatsApp, Facebook and to a lesser extent YouTube and Instagram, similar to university students in Jordan, where "social networks were an important source of information to learn about the pandemic" (10). Another result was that Twitter is considered the most reliable social network to obtain direct and updated information, similar to the results of a study carried out in Qatar and Kuwait, which, after analyzing 2.8 million tweets to identify the main topics published by Twitter users, related to the COVID-19 pandemic, identified 12 topics. It was concluded that the networks allow communicating medical information directly to the public (11).

We also found coincidences with a study carried out in Great Britain, in relation to the use of WhatsApp, considering it as "help to maintain during the pandemic official information more recent in health matters and share information with responsibility"(12), to prevent false data from circulating without scientific basis. Twitter, Facebook and WhatsApp are networks that create a group communication, becoming the perfect medium and sometimes the only one to multiply the impact of messages. "This has greatly facilitated the formation of "tribes of opinion": interpenetrated groups of people who share ideas, values and selective information"(13). These network nodes make it easier to establish a group opinion, specify stories, and identify false data.

The study students stated that they send information previously analyzed. They also revealed that most of them use this data to carry out organized prevention work with their social, friendly and family environment. However, there is not enough literature that explores WhatsApp as a potential telecommunications tool in the health field (14). These students reported that they make enough use of this social network in COVID-19 prevention as well as the social networks of Twitter and Facebook.

Research has been carried out with medical students in relation to the use of social networks as a preventive vehicle of COVID-19^(5,9). However, the difference is that, in the present study, nursing students use it to transmit preventive measures to their family and social circle. In the other studies cited, such as that of Iranian medical students, they come to obtain a high level of knowledge related to COVID-19, with self-learned preventive behaviors, which they use for their self-care.

Some authors state that "in the current COVID-19 pandemic, social media has the potential, if used responsibly and appropriately, to provide quick and effective outreach routes for key information"⁽¹⁵⁾. Another author of a study conducted in Mexico reports that people claim to have been helped to understand the health crisis and what they can do thanks to the media, including social networks. However, "approximately one in three people say that the media has exaggerated the pandemic,

so it is necessary that there be a regulation of the pandemic information veracity $r^{(16)}$.

The participation of students to clarify aspects related to the transmission of this disease is of utmost importance, because being students for a health sciences profession, they are consulted for better information in their family and social environment; the same reveals a study in Saudi Arabia: "Medical students are a source of information for their families and communities and that current knowledge and self-reported preventive behaviors related to the COVID-19 pandemic were sufficient"(4).

What was expressed by the students of the cited study is also a concern of those investigated in this study, because they try to transmit valid and reliable information, product of scientific research to avoid fake news, which leads to fear and uncertainty of the population. In this pandemic, it is considered important that people internalize preventive measures to avoid contagion with COVID-19, for which "the challenge for health professionals and students is how to transfer knowledge of current best practices to people who need it most, at a rate equal to or better than the expanding epidemic" (3).

According to the Life-Health paradigm, nurses' primary function is to maintain life, ensuring the satisfaction of a set of essential needs for it, but which are diverse in their manifestations. The assessment of biological, psychological and social factors, among others, that led the person to such a situation of alteration of their health is the essence of care. These psychobiological and social factors are also considered by the study participants, who include them in their orientations. The rapid expansion of the use of social networks among the population and health professionals "creates a unique opportunity for researchers to develop health promotion programs based on social networks and potentially reduce social inequalities in health" (6).

Some study participants believe that, when transmitting information on COVID-19 prevention measures through social networks, they can be agents of change, in the sense of using these communication channels, which are faster than the traditional ones and are very necessary in times of health crisis, such as this pandemic. "The potential benefits of social networks depend on the type and quality of information that users share and on their perception of the content produced in this medium and also on the speed with which the information arrives" (9). Students said that being in a digital age where information is within their reach can take them to different places, regardless of social or economic strata, using social networks in favor of health, educating the population so that they can differentiate the true information from a false or alarmist one.

Students carry out COVID-19 prevention activities through the guidance that they provide to their relatives and the closest environment, seeking their self-care in relation to COVID prevention and their empowerment, transmitting information or scientific evidence so that they achieve greater security and thus bring it into practice, because knowledge and awareness about the disease and also the perception of risk of people are determining factors in the way they respond and be involved in preventive behaviors⁽³⁾.

Students showed satisfaction with transmission of knowledge for which they use infographics, which they learned to elaborate

during their community practices, taking care that these must be: "easily accessible, attractive, reusable and modifiable to adapt to local needs and user requirements and are more likely to spread innovation to combat the current pandemic"⁽¹⁰⁾. These results are similar to those obtained in Brazil, where the authors found "the sense of the importance of the profession for students and how satisfactory it was for them to put into practice their educational activities and clarify the community's doubts"⁽¹⁷⁾. Health education aims to encourage changes in lifestyle habits by making them healthier, promoting self-care and raising awareness of the disease severity, as the students of this study do in the COVID-19 pandemic.

The researchers agree with the current conception that nursing professionals are part of the first line of care and care and have a preponderant role in improving access to and quality of health care. "The current scenario can become especially fertile for countries to invest in improving working conditions and nursing education, which will result in important achievements for universal health coverage and access to health for the populations of the region" (18). "While the interest of many in connecting and educating the community in such a critical situation as this is laudable, it is critical that social media communication is also guided by scientific evidence and good public health practices" (19). The foregoing coincides with the results of this study in which the COVID-19 pandemic shows us the need to train students and health professionals in risk communication and responsible use of their scientific and technical knowledge.

The study confirmed the search for empowerment of community members by students: "providing them with tools to distinguish real and scientific information from false or alarmist", which is similar to what they found in a study in Peru where nursing inmates perceive the importance of the participation of community members in health prevention and promotion activities and their empowerment (20). One of the main contributions of the Life-Health paradigm is the participation and recognition of social actors (relatives, neighbors and members close to students) in educational processes, no longer seen only as passive recipients and beneficiaries but as active subjects who critically participate in the construction of alternatives aimed at individual and collective well-being (7).

Due to the complexity of the COVID-19 pandemic, some students identified the need for multidisciplinary work in health care since their training, especially in times of pandemic, which is similar to what was found in Spain where nurses recognize that all team members are important and that each one contributes their specificities ⁽²¹⁾. Assistance by the entire health team is required: doctors, nurses, nutritionists, psychologists, etc. Each of these professions must contribute to a joint work so that it is more coordinated and solid, both in community and hospital care.

If students have the experience of interdisciplinary work during their training, like the cases reported in the study, as professionals they will continue with this multidisciplinary work for the sake of better care for people in health prevention and promotion, treatment of diseases, or in a pandemic, such as the one we are in.

Study limitations

The limitation of this study is that it was carried out only with students from a nursing school. It is suggested to carry out also studies with students from other universities and with health professionals, including nurses, for further analysis of this topic.

Contributions for nursing, health or public policies

This study is relevant for the health area, because it shows the need to strengthen the transmission of health professionals' and nursing students' knowledge using social networks, with the purpose of developing a culture of health prevention, even more so in times of pandemic, to ensure the care of people's lives and health, according to the health needs of the country in which they live, making use of various technologies.

FINAL CONSIDERATIONS

COVID-19 prevention is carried out by nursing students with the use of various social networks such as Twitter, WhatsApp, and Facebook, more frequently for information and communication of preventive measures because they are quick and simple means of communication with their closest environment, family, friends and neighbors, allowing the sharing of reliable information.

The results of this study show the important role played by nursing students, perceiving themselves as agents of change by transmitting correct information through social networks, being sought for better information in their family and social environment, which is assumed with responsibility and analytical capacity.

To provide health guidance, nursing students consider people's physical, emotional and social environment, as well as the level of knowledge and their health practices, ensuring the relevance of the information to be provided within a Life-Health approach, identifying with nurses' primary function, which is to maintain people's life and health.

In the study, participants reassess nursing students' educational function, showing satisfaction in developing what they have learned in community practices and contributing by transmitting knowledge and generating the empowerment of people whom they consider to be active subjects who critically participate in the construction of alternatives oriented to well-being individual and collective, in the fight against the COVID-19 pandemic.

Multidisciplinary work is highlighted by some students in CO-VID-19 prevention as a complex problem that requires the entire team's participation and commitment in exercise and training.

SUPPLEMENTARY MATERIAL

Available from SciELO Data (DOI: https://doi.org/10.48331/scielodata.JRLZ9A).

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REFERENCIAS

- Instituto Nacional de Salud, Centro Nacional de Epidemiología, Prevención y Control de Enfermedades del Ministerio de Salud (PE). Sala Situacional COVID-19 Perú [Internet]. Lima; 2021. [cited 2021 Sep 16]. Available from: https://covid19.minsa.gob.pe/sala_situacional.asp
- Herrera-Peco I, de la Torre-Montero JC. Preface of Special Issue "Cares in the Age of Communication: Health Education and Healthy Lifestyles": social media and Health Communication in a Pandemic? Europ J Investig Health, Psychol Educ. MDPI AG. 2020;10(2):575–578. https://doi.org/10.3390/ejihpe10020042
- Karasneh R, Al-Azzam S, Muflih S, Soudah O, Hawamdeh S, Khader Y. Media's effect on shaping knowledge, awareness risk perceptions and communication practices of pandemic COVID-19 among pharmacists. Res Social Adm Pharm. 2021;17(1):1897-1902. https://doi. org/10.1016/j.sapharm.2020.04.027
- 4. Alsoghair M, Almazyad M, Alburaykan T, Alsultan A, Alnughaymishi A, Almazyad S, et al. Medical Students and COVID-19: Knowledge, Preventive Behaviors, and Risk Perception. Int J Environ Res Public Health. 2021;18(2):842. https://doi.org/10.3390/ijerph18020842
- 5. Taghrir MH, Borazjani R, Shiraly R. COVID-19 and Iranian Medical Students: a Survey on Their Related-Knowledge, Preventive Behaviors and Risk Perception. Arch Iran Med. 2020;23(4):249-54. https://doi.org/10.34172/aim.2020.06
- 6. Huo J, Desai R, Hong YR, Turner K, Mainous AG 3rd, Bian J. Use of social media in Health Communication: findings from the Health Information National Trends Survey 2013, 2014, and 2017. Cancer Control. 2019;26(1):1073274819841442
- 7. García M, Gómez B, Cárdenas L, Monroy A. Cuidados de saúde: paradigma de enfermeiros no México-a reconstrução da Estrada. Esc Anna Nery. 2009;13(2):287-96. https://doi.org/10.1590/S1414-81452009000200008
- 8. Minayo MCS. O desafio do conhecimento: pesquisa qualitativa em saúde. 14 ed. São Paulo: Hucitec; 2014. 407p.
- 9. Hausmann JS, Touloumtzis C, White MT, Colbert JA, Gooding HC. Adolescent and Young Adult Use of social media for Health and Its Implications. J Adolesc Health. 2017;60(6):714-9. https://doi.org/10.1016/j.jadohealth.2016.12.025
- 10. Olaimat AN, Aolymat I, Shahbaz HM, Holley RA. Knowledge and Information Sources About COVID-19 Among University Students in Jordan: A Cross-Sectional Study. Front Public Health. 2020;8:254. https://doi.org/10.3389/fpubh.2020.00254
- Abd-Alrazaq A, Alhuwail D, Househ M, Hamdi M, Shah Z. Top Concerns of Tweeters During the COVID-19 Pandemic: Infoveillance Study. J Med Internet Res. 2020;22(4):e19016. https://doi.org/10.2196/19016
- 12. Jakhar D, Kaul S, Kaur I. WhatsApp messenger as a teledermatology tool during coronavirus disease (COVID-19): from bedside to phone-side. Clin Exp Dermatol. 2020;45(6):739-740. https://doi.org/10.1111/ced.14227
- 13. Saitz R, Schwitzer G. Communicating Science in the Time of a Pandemic. JAMA. 2020;324(5):443-444. https://doi.org/10.1001/jama.2020.12535
- 14. Organización Panamericana de la Salud (OPS). La OMS lleva información de la COVID-19 a millones a través de WhatsApp, ahora en español [Internet]. Washington (DC);2020 [cited 2020 Aug 06]. Available from: https://www.paho.org/es/noticias/27-3-2020-oms-lleva-informacion-covid-19-millones-traves-whatsapp-ahora-espanol
- 15. Chan AKM, Nickson CP, Rudolph JW, Lee A, Joynt GM. social media for rapid knowledge dissemination: early experience from the COVID-19 pandemic. Anaesthesia. 2020;75(12):1579-1582. https://doi.org/10.1111/anae.15057
- 16. Díaz-Badillo Á, Ramírez-Pfeiffer C, López-Alvarenga JC. Social networks, machine learning and cladistics in the time of COVID-19. Cir Cir. 2020;88(4):395-8. https://doi.org/10.24875/ciru.m20000065
- 17. Rocha RG, Araújo SA, Oliveira SA, Nogueira PL, Ferreira TN. Percepção de acadêmicos de enfermagem sobre a experiência das práticas de educação em saúde. Rev Enferm Centro O Min. 2017;7: e1603. https://doi.org/10.19175/recom.v7i0.1603
- 18. Cassiani SH, Munar EF, Umpiérrez A, Peduzzi M, Hernández C. La situación de la enfermería en el mundo y la Región de las Américas en tiempos de la pandemia de COVID-19. Rev Panam Salud Publica. 2020; 44:e64. https://doi.org/10.26633/RPSP.2020.64
- 19. Fernández GL, Bravo VP. Experts and social networks: how to communicate in times of pandemic? Rev méd. Chile. 2020;148(4):560-1. https://doi.org/10.4067/s0034-98872020000400560
- 20. Santos GC, Torres SD, Capcha LE, García GF, Infante M, Erdmann AL. Learning experiences in community health of nursing students. Rev Bras Enferm. 2019;72(4):841-7. https://doi.org/10.1590/0034-7167-2017-0410
- 21. Thofehrn MB, López MJ, Amestoy SC, Porto AR, Bettin AC, Fernandes HN, et al. Trabajo en equipo: visión de los enfermeros de un hospital de Murcia/España. Enferm Glob [Internet]. 2014 [cited 2021 Jul 11];13(36):223-7. Available from: https://scielo.isciii.es/scielo.php?script=sci_artt ext&pid=S1695-61412014000400012