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RESEARCH

EXPERIENCES AND SUPPORT NETWORK OF NURSING STUDENTS DURING THE SARS-COV-2 INFECTION PERIOD

EXPERIÊNCIAS E REDE DE APOIO DE ESTUDANTES DE ENFERMAGEM DURANTE O PERÍODO DE INFECÇÃO PELO SARS-COV-2

EXPERIENCIAS Y RED DE APOYO DE ESTUDIANTES DE ENFERMERÍA DURANTE EL PERÍODO DE INFECCIÓN POR SARS-COV-2PANDEMIA DE COVID-19

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ABSTRACT

Objective: To understand how Nursing students perceived the role of the support network in the face of their experience with SARS-CoV-2 infection. **Method**: Descriptive study, with a qualitative approach. Data were collected between November 2021 and May 2022, through remote and in-person, audio-recorded interviews with 15 students, selected for convenience. The data were subjected to content analysis, thematic modality, and interpreted in light of Roy's adaptation model. **Results**: The subjects were all female, who, during the SARS-CoV-2 infection period, experienced different needs, which led to three adaptive modes: physiological, real-life function and interdependence. The informal network (family, friends, neighbors, and church members) offered instrumental, informational, emotional, and spiritual support, especially via telephone and messaging apps. Support from the formal network (healthcare services and professionals) was perceived as insufficient and, at times, inhumane. **Conclusion**: The family, even when distant, was the main source of support. The health system's actions were limited to punctual assistance and the provision of guidance on care, being considered insufficient in some situations.

Keywords: Students, Nursing; SARS-CoV-2; Social Networking; Coronavirus Infections; Universities; Nursing Theory.

RESUMO

***Objetivo**: apreender como estudantes de Enfermagem perceberam a atuação da rede de apoio diante da experiência com a infecção pelo SARS-CoV-2. **Método**: estudo descritivo, de abordagem qualitativa. Os dados foram coletados entre novembro de 2021 e maio de 2022, mediante entrevistas remotas e presenciais, audiogravadas com 15 estudantes, selecionadas por conveniência. Os dados foram submetidos à análise de conteúdo, modalidade temática, e interpretados à luz do modelo de adaptação de Roy. **Resultados**: as participantes foram todas do sexo feminino, as quais, durante o período de infecção pelo SARS-CoV-2, experienciaram diferentes necessidades, que levaram a três modos adaptativos: fisiológico, função na vida real e interdependência. A rede informal (familiares, amigos, vizinhos e membros de igreja) ofertou apoio instrumental, informacional, emocional e espiritual, sobretudo por telefone e aplicativos de mensagens. O apoio da rede formal (serviços e profissionais de saúde) foi percebido como insuficiente e, por vezes, desumano. **Conclusão**: a família, mesmo quando distante, constituiu a principal fonte de apoio. A atuação do sistema de saúde limitou-se a uma assistência pontual e ao repasse de orientações sobre cuidados, sendo considerada insuficiente em algumas situações.*

***Palavras-chave:** Estudantes de Enfermagem; SARS-CoV-2; Rede Social; Infecções por Coronavírus; Universidades; Teorias de Enfermagem.*

RESUMEN

***Objetivo**: comprender la práctica profesional de cuidados en salud mental realizada en Objetivo: comprender cómo los estudiantes de Enfermería percibieron la actuación de la red de apoyo frente a la experiencia con la infección por SARS-CoV-2. **Método**: estudio descriptivo, de enfoque cualitativo. Los datos se recopilaron entre noviembre de 2021 y mayo de 2022, mediante entrevistas remotas y presenciales, grabadas en audio con 15 estudiantes, seleccionadas por conveniencia. Los datos se sometieron a análisis de contenido, modalidad temática, e interpretados a la luz del modelo de adaptación de Roy. **Resultados**: las participantes fueron todas mujeres, quienes, durante el período de infección por SARS-CoV-2, experimentaron diferentes necesidades, que llevaron a tres modos adaptativos: fisiológico, función en la vida real e interdependencia. La red informal (familiares, amigos, vecinos y miembros de la iglesia) ofreció apoyo instrumental, informativo, emocional y espiritual, principalmente por teléfono y aplicaciones de mensajería. El apoyo de la red formal (servicios y profesionales de la salud) fue percibido como insuficiente y, en ocasiones, deshumano. **Conclusión**: la familia, incluso a distancia, constituyó la principal fuente de apoyo. La actuación del sistema de salud se limitó a una asistencia puntual y a proporcionar orientaciones sobre cuidados, siendo considerada insuficiente en algunas situaciones.*

***Palabras clave:** Estudiantes de Enfermería; SARS-CoV-2; Red Social; Infecciones por Coronavirus; Universidades; Teoría de Enfermería.*

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INTRODUCTION

The COVID-19 pandemic, caused by the SARS-CoV-2 virus, has emerged as the biggest public health challenge of the 21st century. There have been and still are countless efforts by societies and governments to overcome the economic, social, political and educational losses resulting from the changes that were necessary to prevent the spread of the virus, especially in the first months of the pandemic[1–3].

According to Callista Roy's adaptation theory, situations that require adaptations and changes are frequently experienced by individuals or communities. In fact, these circumstances influence and affect human development. Furthermore, an environment in the process of change encourages people to respond to adaptation[4].

When receiving some type of stimulus, whether internal or external, people/families/societies adopt some form of adaptation to face the situation. In turn, networks or support systems help individuals' psychosocial adaptation, so that they can deal with such situations in the most competent way possible, preventing further health problems[4].

During the COVID-19 pandemic, people of all age groups have had to live with and adapt to changes in various spheres. Children, teenagers, and young people, especially, had to adapt to school activities. Faced with the challenges imposed, social support networks — understood as significant interpersonal relationships that a person establishes at different stages of their life cycle and which can be formed by people, groups, communities, religious institutions, associations, clubs and health institutions and of social assistance[5,6] — had their importance reaffirmed, since at that moment of fragility they were even more necessary[7].

National and international studies have highlighted the impact of the pandemic on the emotional health of adolescent and young university students, due to interruptions in academic activities and social coexistence.[8–11] Furthermore, some strategies used to support students during the pandemic were identified, such as providing equipment for remote access to academic activities (tablets), cards for mobile internet devices and sometimes psychological support. These strategies aimed to assist remote academic activities, enable virtual contact with classmates and teachers and facilitate coping with the situation[11,12]. However, no studies were found on how they experienced the SARS-CoV-2 infection or how they were advised when the disease occurred.

Given this, the following questions arose: (a) How did Nursing students experience the SARS-CoV-2 infection?; (b) What changes occurred in their lives?; (c) Who made up your support and social support network during that period? His/Her knowledge about the adaptations and social support network that students seek in situations of illness can support the development of strategies to be implemented by educational and health institutions in situations that, similar to the COVID-19 pandemic, require isolation and social distancing, with the aim of minimizing negative effects on one's health and quality of life[13]. Thus, the following objective was defined for this study: to understand how Nursing students perceived the performance of the support network in the face of their experience with SARS-CoV-2 infection.

METHOD

This is a descriptive study, with a qualitative approach, carried out in the city of Maringá in Paraná state. together with Nursing academics. Callista Roy's adaptation theory was used as a reference, which advocates that, faced with environmental stimuli, people/families/societies adopt four forms of adaptation: physiological mode, self-concept, function in real life and interdependence. It should be noted that, in the preparation and presentation of the research report, the recommendations of the Consolidated Criteria for Reporting Qualitative Research (COREQ) were followed.

The municipality where the study was carried out is medium-sized, located in the northeast region of the state of Paraná, in Brazil, and has a state university, a university center and nine private colleges. In total, the municipality has six undergraduate courses and two more offered in distant municipalities, around 40 kilometers away.

The study informants were university students who met the following inclusion criteria: being 18 years old or over, enrolled in any year of the undergraduate Nursing course and having been infected by SARS-CoV-2. A letter requesting authorization, a general explanation about the study and the type of participation desired was sent to the coordinator of the Nursing courses at seven higher education institutions that offer the course. The research was authorized in four of them.

The invitation to participate in the study contained a brief explanation of the objective of the research, a link to access the Free and Informed Consent Form (ICF) and the form for collecting sociodemographic characterization data, as well as the contact address of the researchers to schedule an interview. This invitation was sent by the course coordinators to all regularly enrolled students, via email and application groups (*WhatsApp*®).

Given the lack of contact from students after 15 days of sending the invitations, it was decided to use the non-probability sampling technique called snowball sampling, as the researchers were aware of four students who had been infected by SARS-CoV-2. According to this technique, people with a certain common characteristic are connected to a social network, made up of ties, and are more easily identified by another component of that same network than by researchers[14].

Therefore, the first four students were invited to participate in the study through a specific invitation, and all accepted. At the end of the interviews, they were asked to indicate possible new subjects and to provide their contact address. This request was made to all study subjects.

Initial contact with the other subjects was made via telephone call and/or text message on WhatsApp®. In cases of acceptance, the day and time for the interview were defined, according to the availability and preference of the subjects. Of the 17 who agreed to participate, after four scheduling attempts, two were not included due to lack of time.

Data were collected between October 2021 and April 2022, through previously scheduled and audio-recorded interviews. Of the 15 interviews, 12 were carried out remotely (*Google Meet or WhatsApp®*), and the other three were face-to-face, in a private room at the university. In both modalities, the interview time varied from 30 to 75 minutes, and during them a semi-structured script was used, prepared by the researchers after a literature review and based on the study objectives. The script contained nine questions related to characterization, four related to the experience with SARS-CoV-2 infection and seven related to the social support network during the infection period. The interview script did not go through a formal validation process, but was discussed and modified, according to suggestions, in the researchers' study group.

The interviews were carried out by a group of researchers consisting of a PhD in Nursing and three undergraduate students previously trained to collect qualitative data. The theoretical part of the training took place based on previous readings and three virtual meetings lasting two hours each. The practical part involved observation, participation as a secondary interviewer in at least one virtual interview carried out by the PhD and carrying out one or two interviews as the main interviewer under the direct supervision of the PhD in Nursing. After each interview carried out during the training, the group discussed aspects related to its conduct and necessary changes in this process, to improve future interviews.

The links to the virtual interviews were created by the researchers and sent to subject via a communication application. It is noteworthy that, in face-to-face interviews, all recommended measures were adopted to prevent the transmission of COVID-19.

The interviews were audio recorded with the help of a mobile phone voice recorder, allowing the subject to speak freely about the experience of being infected by SAR-CoV-2. Small interventions were carried out with the aim of stimulating the speech, helping the subject to remember details and to clarify aspects that were obscure or covered superficially. The researchers' impressions obtained during the interviews were noted in a field diary and supported the speech analysis process.

All interviews were transcribed in full by the same interviewers, and preferably on the same day they were carried out, aiming to obtain as much information and impressions as possible. It was verified, after discussion between the researchers, that in the 13th interview there was already enough data to understand the object under study. Even so, two more interviews were carried out to ensure data saturation[15].

The transcribed material was submitted to content analysis, thematic modality, following the three proposed steps[15]. In the pre-analysis phase, exhaustive reading was carried out, with a view to getting closer to the content of the records. The material exploration step consisted of coding the data by identifying the content of interest in accordance with the objective of the study. Next, the registration and context units, identified in the exploratory phase, were grouped into themes relating to care, necessary adaptations, and the presence of a social support network during the period of SARS-CoV-2 infection. Finally, these data were organized according to the similarity of meanings and interpreted considering Callista Roy's adaptation theory, forming two thematic categories. The first category, “Adaptation needs during SARS-CoV-2 infection”, presents the adaptive modes described by Roy and identified in the analyzed data; the second category, “Social support network during SARS-CoV-2 infection”, describes the role of the support network during the students’ experience with the infection.

In developing the study, the ethical precepts regulated by Resolutions No. 466/2012 and No. 510/2016 of the National Health Council were respected and the guidelines for research procedures in a virtual environment from the National Research Ethics Commission (CONEP) were followed. The project was approved by the Research Ethics Committee of the signatory institution (suppressed for blind evaluation). A copy of the ICF signed by the main

researcher was previously sent to the subjects remotely, and, before the start of the interview, they were asked to verbally express their acceptance to participate in the study, for recording purposes. Subjects interviewed face-to-face expressed their consent to participate in the study by signing the ICF in two copies.

RESULTS

The 15 study subjects were all female, aged between 19 and 39, eight of whom were enrolled in private institutions. Eight students lived with their parents in the study municipality and two in neighboring cities; two lived in students' shared houses, two lived alone and one lived on a boarding basis at the institution where she studied. Regarding marital status, 13 were single, one was a widow, and one was divorced. The predominant religion was Christian (14 interviewees), and one reported not belonging to any religion. From data analysis, two categories emerged, which will be described below.

Adaptation needs during SARS-CoV-2 infection

The Nursing students participating in this study, infected by SARS-CoV-2, needed to implement strategies that allowed them to overcome, in the best possible way, the period of infection and the risk of transmission. Some experienced the period of illness away from their families and turned to other sources of help to face the changes imposed by the diagnosis of an acute viral infection.

Adaptation referring to the physiological mode, for example, occurred when students and/or their families tried to adapt to meet physical needs in the face of the manifestation of symptoms caused by the infection:

> *Then the house turned into a mess when it came to food; no one had the strength to go to the kitchen to make food, clean the house, tidy up; and we experienced this very difficult moment* (E7).

In a family dynamic, members generally help each other with care, but when everyone becomes ill, this is not possible, which creates the need to find other strategies for the family to be assisted in their basic needs. However, in some situations, the adaptation strategies to the physiological mode did not occur satisfactorily, causing harm to the student's physical health during the period of illness. The adaptive mode, therefore, occurred inefficiently:

> *I stopped eating to stay in my room when I knew the other colleague was at home* [...] *I lost four kilos* [...] *I survived on oranges and instant noodles* (E2).

When they have no one to count on, people make adaptations and seek strategies that allow them to meet physiological and health-related needs – and this search characterizes a form of adaptation.

> [...] *we bought food online, via "Ifood"* [...] (E15).

> *My medicines, grocery stores... I had to request everything via "IFood"as I couldn't count on someone to bring them up to me* (E1).

In situations where all family members were infected simultaneously, the family needed to organize itself and make important decisions related to the dynamics of care, characterizing the adaptive interdependence mode:

> *When my sister got sick, someone had to take care of my nephew, and it was me, as I was the one with the mildest symptoms. As much as we tried to isolate ourselves in the room, we passed from one to the other, and the concern was for him* [...] *So we kind of went through the trial by fire, we wore masks for everything, but we ended up having contact, and even more so with children, who did not wear a mask* (E4).

The students' need to have information about family members with COVID-19 admitted to hospitals shows the interdependence of other systems, such as the health system:

> *My main difficulty was knowing the correct information, knowing what was happening* [...] *we had support from the social worker* [...] *a good support* [...] (E6).

The need to have someone to provide support during illness highlights adaptation through interdependence, as already mentioned. However, depending on other people for activities of daily living can also be a challenge:

> *The issue was not having someone I could count on, because I was very ill in the first few days* [...] (E1).

> *It was difficult to deal with everyone in the house being sick as no one could take care of anyone else, everyone had to take care of themselves* (E7).

> *Being in isolation with the whole family and depending on others for activities was difficult* [...] (E10).

The difficulty for family members to perform care functions for each other when everyone is ill — functions that are generally assumed by family members — and the inevitability of resorting to other ways for these needs to be met reveal the mode of adaptation function in the real life.

Losing your job — a very common occurrence during the pandemic — meant no longer contributing financially to family support, thus creating the need to adopt other forms of adaptation:

> *My sister and I ended up losing our jobs* [...] *but what saved us was that my mother got [government assistance], so I could pay the bills, buy some food, and not suffer so much financially or materially* (E8).

The speeches highlight the adaptation needs and the ways found for family reorganization to meet the minimum basic needs in facing the pandemic situation.

Social support network during SARS-CoV-2 infection

This category describes the social networks that supported Nursing students and their families during the period of SARS-CoV-2 infection. It is observed the presence of an informal network, such as friends, family, and church; as well as a formal one, characterized by professionals belonging to the public and/or private health system, and educational institutions, which gave rise to two subcategories, which will be addressed below.

Informal support network during SARS-COV-2 infection

This subcategory highlights the informal social support network of Nursing students, represented by family, friends, neighbors and church members. This network provided support in daily activities, such as cooking and shopping, provided emotional support and monitored symptoms, face-to-face or remotely. In some cases, the Nursing students under study also constituted a source of support for their families. In any case, the family was the main and most present source of support for its members:

> *My mother was there all the time, my aunt* [...] *made me soup, with yam, because they say that yam is good* (E1).

> *It was just my husband and I* [...] *He helped me around because of me and my limitations, for I was very short of breath, very tired* (E5).

> [...] *inside the house, it was my mother and I who did things, and then what needed to be done outside the house was my father for until then he had not tested positive* (E14).

Since social isolation was considered necessary, the family provided guidance on care, emotional and spiritual support, even when they were far away, through instant messaging/voice service applications. It should be noted that, when it was possible to be present, they respected the recommended guidelines and care:

> *For here at home, they are quite religious, so my family had this more spiritual support* (E3).

> *We have a family group (on the messaging/voice application) and we talked* (E1).

> [...] *I have an uncle who is like a father to me, he came two or three times a day, during those 15 days, and stayed at the gate, far away, while I was inside the house, just to see how I was, if I was breathing well* (E12).

Friends and members of the same church also offered emotional support, helped with physical health care and even with financial resources:

> *I had a neighbor who was very kind to me. And when she found out that I had COVID, she always assisted me by leaving something at my gate (E5).*

> *We don't have anyone else from our family here in the city, it was just us, but we had help from the church* [...] *they were very supportive by providing lunch, dinner, grocery shopping, going to the pharmacy, bringing fruits, vegetables, among other things (E7).*

> *The support we sought most was from the church, always in constant contact with the brothers (from church). They were always there helping, talking, and always visiting us, even if it was just arriving at the gate and talking from afar (E8).*

> *At first they* [*the student's parents*] *were fine, but after the tenth day they started to get worse* [...] *there were people from the church who ran after me, took my father to the doctor, paid for the appointment and took everything he needed* (E6).

In situations where a family member was in isolation, the student, as a family member, acted as a support/care provider:

> *I used to go there, I used to go to the market, left items for them, got medication, everything they needed and monitored my mother. I left a blood pressure monitor, an oximeter, I left everything there and every day I asked her to take a photo (from the results of the measurements) and send it to me; I used to make a video call with them* (E5).

> *We were monitoring* [...] *my biggest fear was always about my father* (E9).

> *I was the one who had the mildest symptoms, which is why I was the one who took care of everyone during this period, as everyone was very bad* (E11).

It was observed that the Nursing students from this study were involved in the care and monitoring of their family members, face-to-face and remotely.

Formal sociap support network during SARS-CoV-2 infection

This subcategory presents speeches on the evaluation about the performance of the formal social support network, represented by the support offered by the public and/or private health system (primary, outpatient and hospital care).

In primary health care, support was perceived through actions aimed at monitoring infected people, through telephone contacts carried out during or after the period of SARS-CoV-2 infection:

> *After a while the UBS* [*basic health unit*] *called us, but it was a long time later. They would like to know if everything was fine, if we were in isolation, but as a lot of time had passed, we just informed them that we had already done the retest, from the pharmacy, to confirm if he still had COVID and if it was okay to go out* (E3).

> *Then my UBS of reference called saying that if I needed to extend the sick leave, if I wasn't feeling well, I just had to say and they would contact me to make an appointment to get another medical certificate, but it was the only assistance I had* (E1).

> *The people from the Health Department called me three times to see how I was doing* (E5).

Overall, the support received from primary care was not considered good by Nursing students, and it was even possible to notice disparities between municipalities and in the professionals' conduct, marked by limitations and "neglects":

> [...] *it is a reality that here in my city, for example, there is no such telemonitoring* (E4).

> *As at the beginning I realized that they went several times and the doctors didn't ask for x-rays, or a CT scan, anything about the lungs* [...] *so I thought there was a little lack of this very early diagnosis, this early pulmonary monitoring. Maybe my mother wouldn't suffer of so many consequences (from COVID) today* (E5).

> *I think that at least he (the doctor) should perform a lung auscultation* [...] *to verify if my lungs were clean, I end up remaining with short of breath for a while* [...] *and I went for a consultation and more, and they required an X-ray for me, to verify how my lungs were, and this X-ray was only released a year later* (E12).

The changes implemented in emergency services were perceived as impersonal, although recognized as necessary to cope with the flow and high demand of patients:

> *Look, at the time I went to get a consultation (in the emergency service) the doctors were very careful about any kind of contact and distancing* [...] *so, the staff were very distant, who practically did not touch me at any time, and whether we like it or not, we miss these interactions, we want humanized care* (E5).

> [...] *it was quick assistance, especially because they needed to avoid contact with us, because they would have contact with other people, the person who collects the COVID test, it is a little like that, dehumanized; someone calls the patient , the patient sits there in the room, and takes the swab [...], once the swab is collected, "You can leave, you'll come back in a few days to get it (the result)", that's all, bye* (E14).

Another aspect mentioned was the difficulty in obtaining information about family members hospitalized for treatment of COVID-19. Although the transmission of information about the health status of their loved ones was a source of comfort, hospitals faced difficulties in doing this quickly and with the frequency desired by families:

> [...] *it was difficult to pass on information, to calm down, because we had almost no information* [...] *and we were very distressed* (E6).

For those who sought care in the private sector outpatient network, the perception, in some cases, was of quick assistance, with welcoming and good delivery of guidance, monitoring and care with COVID-19 and in other situations, deficient:

> *I was seen in 20 minutes, they already did the quick test, it was positive; and then the hospital called me three times during my isolation, giving me some tips as to hydrate me, eat well, even without my taste buds* [...] *I was very well oriented* [...] *I felt very welcomed by everyone* (E1).

> *The assistance during the illness was very good, the doctors who attended to my parents got the medications right, they were always ordering tests, monitoring them very closely, even via messages, they always asked if everything was ok and if I needed anything* (E7).

> *They asked for permission for the private health plan, but the plan did not release the test. I think this was irresponsible* [...] *after a few months, I asked again as I couldn't smell or taste anything. Then they asked for the test to find out if I had antibodies and I had* [...] *Only two months later I was confirmed that I had had COVID* (E13).

The assistance received by Nursing students as patients or companions of family members infected by SARS-CoV-2 was sometimes considered reductionist and irresponsible, in situations in which the symptoms mentioned were not valued during the search for health care.

DISCUSSION

Support systems contribute to meeting a person's needs. The relationship of interdependence is essential to human coexistence and can directly interfere with the way individuals face different situations in life. According to Roy, support groups can promote people's adaptation through the exchange of experiences, mutual assistance and, in more formal situations, educational interventions.

Adapting to new situations was a clear need during the most worrying moments of the pandemic. Because it is something new, coping with the infection caused by SARS-CoV-2 generated many doubts about how to behave and how to carry out care in the general population. This was no different for the Nursing students participating in this research.

According to Callista Roy's theory, people maintain continuous interaction with the environment, receiving stimuli that cause internal and external changes and the need to adapt, which can take four different modes: physiological, self-concept, function in real life and interdependence[4,16].

Considering the modes of adaptation proposed by Roy, among the strategies adopted by Nursing students infected by SARS-CoV-2, distancing from family members was highlighted as one of the most frequent adaptive means, with the purpose of avoiding contamination of people who are very important and close to them. It is worth mentioning that this attitude was also a guideline established internationally by official bodies as one of the main measures to fight the pandemic. However, the implementation of these measures brought a series of challenges to the population and significant impacts on health, especially in the mental area.

An example of this is a national study in which it was revealed that, as a result of a scenario where a series of transformations and adversities arising from living with the pandemic caused by SARS-CoV-2 were noticeable, university students experienced negative feelings, such as fear, worry and anguish[17].

Concern about the mental health of individuals associated with limitations in the use of technologies that would allow the general population greater access to support services led to the implementation, in some locations, of cultural projects with a specific approach in television and radio programs[18].

The interdependence mode was also an adaptive strategy that manifested itself when there was dependence on third parties to carry out activities during the period of SARS-CoV-2 infection. These people helped the students meet physiological, safety and esteem needs, as knowing that others care about their health and well-being makes people in situations of illness feel loved and valued.

According to Maslow's theory, human needs direct individuals' motivation towards different types of satisfaction. In the case of the subjects in this study, who did not present serious symptoms of SARS-CoV-2 infection, meeting physiological needs, which are the most important and therefore occupy the base of the pyramid, was restricted to the area of nutrition and hydration. This was basically due to the impossibility of leaving home to go shopping. In these cases, meeting this need depended on the availability of other people to make and bring the purchases to the infected subjects. It is worth highlighting that

technology allowed that, in some cases, even this need, which is basic, could be met without the direct involvement of a support network — that is, using messaging/voice application services, which were also used to access medications prescribed during the period of infection.

However, to meet the need for esteem and security, the direct action of a person was necessary, although also in these cases the use of messaging applications played a fundamental role, especially when the student lived alone or was not with her family. These applications, using image and sound tools, make it possible to bring people closer together, even when they are kilometers away.

Roy describes that, in this mode of adaptation, support systems, such as spouse, healthcare professionals, friends, family, among others, play great importance in the adaptive process. The interdependence mode focuses on interpersonal relationships, interactions to give and receive love, respect and value, relationships that occur between individuals and other significant people or support systems[16].

The subjects' speech revealed that one of the difficulties experienced while living with the disease, when all family members were infected with SARS-CoV-2, was carrying out/implementing care actions towards their family members, which is normally expected in family life. This fact was due to the worsening of COVID-19 symptoms. In this context, the adaptive mode function in real life highlights the roles that the person occupies in society. The basic need in this mode is social integrity[16]. Given this, adaptation between the students and their families was essential. Therefore, they developed strategies to meet needs during this moment. The existence of government financial aid also helped in cases of people who helped to provide a home or were responsible for it, but who lost their jobs due to the pandemic. Futhermore, the families received support from the extended family (uncles, nephews, etc.), external people (friends), church members and healthcare professionals.

Study results indicate that, within the informal support network, the family is the closest element and, sometimes, the only one that is present and involved in supporting its members[18-20]. The academics' speeches highlighted the family as the most present support network during the period of SARS-CoV-2 infection. Support was provided even when physical contact was prevented, whether due to isolation or distance, when loved ones were far from family members as they lived abroad to study. It took place through the implementation of emotional and spiritual strengthening actions carried out via phone calls or communication applications.

Friends and church members also stood out as a source of support and, therefore, part of the support network. A Brazilian survey observed that during the pandemic, regardless of whether they had contracted the disease or not, Nursing students frequently turned to support networks made up of family, friends, professors and co-workers[9]. According to the authors of the study, technological advances, as well as the greater availability of internet access, allowed that, even during the period of greater restrictions regarding social distancing and isolation measures, a large number of people were able to maintain contact with your relationship network[9].

The same researchers[9] point out that students also sought support from institutional networks, i.e. formal support networks, the majority of which were health services. In the speeches of the subjects in the present study, telemonitoring carried out by health services was perceived as the most evident format for providing support by primary care, offering assistance to meet some of the students' possible needs (providing certificates, scheduling appointments) and /or seeking information about their health status.

The speeches also highlighted the difference in the assistance offered to the population and in its organization, suggesting disparities between municipalities, even when they are neighbors. In this sense, it is noteworthy that, in addition to the overload of health system professionals during the pandemic[21], with limited access to care for COVID-19 symptoms, there were restrictions on routine follow-ups, such as for people with chronic diseases[22].

The lack of information about hospitalized family members was also described by Nursing students as another distressing condition. Despite knowing the hospital routine, they felt the reality of being spectators of the limitations and possibilities of care during the pandemic.

The limitation of information passed on to family members was related to institutional rules, especially in the public system, and to the overload and shortage of healthcare professionals throughout the pandemic. Thus, during this period, many hospital units faced problems related to the inadequacy of the physical structure due to isolation and the growing demand for hospital beds, including intensive care unit beds; scarcity and challenges in allocating available resources; the removal of employees; and the overload of healthcare professionals[23]. These factors may have hindered care and made communication with families difficult.

Students who received care in the private network revealed a positive perception of the assistance received,

characterized by them as fast, with good reception and with the transfer of important information for care during SARS-CoV-2 infection. It is noteworthy that access to the public health system in Brazil is universal, but unequal in different locations in the country[17], which can facilitate this perception that the private system is "better" than the public one, mainly after identifying the causes of problems in the public system during the pandemic. However, if on the one hand the pandemic revealed the dramatic inequality of access to health services and, ultimately, the right to life, on the other hand it showed that the Unified Health System (SUS) is essential. If it did not exist, SARS-CoV-2 could have caused an even more alarming number of deaths than recorded[24].

The study's contributions to assistance highlight the possibility of thinking about the student beyond this condition, as a person who also experiences situations (illness or not) that require adaptations. Teaching students, in addition to helping them individually, will also make them aware of possibilities to be used to encourage others (the person to be cared for) to develop care strategies that are satisfactory for their health.

In turn, the use of Nursing theories in teaching highlights the importance of using a structured framework to support care, so that it can be systematized, organized, and individualized and, above all, considers needs presented by people who find themselves in situations that require adaptations.

The study revealed some gaps in assistance during Nursing students' experience with SARS-CoV-2 infection. Even with all the limitations and adaptations that the health system needed to implement during the pandemic, and even with the uncertainties that arose regarding the assistance provided in the face of the "new", the need for Nursing to work with a more structured perspective was highlighted. This must always occur, not only in situations such as the pandemic period, as the objective is to improve care for people through improvements in communication and attention to psychosocial needs. In this way, it will be possible to obtain more structured care results and increase professional self-esteem, when more effective results of care are perceived[25].

As a possible limitation of this study, it is pointed out that, although students felt great quietness during remote interviews and they favored access during the pandemic period, online data collection may have restricted verbal expressions and prevented observation of details of non-verbal language, which are best seen in face-to-face interviews. Another limiting aspect was the fact that the subjects were all female, making it not possible to obtain data on the experience of male students in relation to their adaptations and the forms of support received during the SARS-CoV-2 infection. New studies with a more comprehensive group of students, from different locations and realities, can contribute to expanding the discussion of strategies to help this group and the population in general, since, in the situation presented, the students were in the shoes of ordinary people who experienced SARS-CoV-2 infection and required assistance, but this proved to be limited in some aspects.

Despite these limitations, it is considered that the results of the present study reinforce the importance of support networks in moments that require adaptations, highlighting the need for educational institutions to present themselves to their students in a more effective way and as an integral part their support network.

FINAL CONSIDERATIONS

During the period of SARS-CoV-2 infection, the Nursing students surveyed reported having experienced different needs and, to resolve them, they activated the physiological adaptive modes, real-life function, and interdependence. The informal network (family, friends, neighbors, and church members) offered instrumental, informational, emotional, and spiritual support, especially via telephone and messaging apps. The family, even when distant, constituted the main source of support; when it was unable to provide support, adaptations were made so that the students' needs were met. In turn, support from the formal network (healthcare services and professionals) was perceived as necessary, but insufficient and limited to punctual assistance and characterized by the transfer of guidance on care.

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