Cogitare Enfermagem

ORIGINAL ARTICLE

SOCIAL REPRESENTATIONS ELABORATED BY NURSING STUDENTS ABOUT COVID-19 PREVENTION

HIGHLIGHTS

1. The students knew how to answer about the prevention measures.
2. Vaccine/vaccination implementation and social isolation generated discussion.
3. Students favored prevention measures.
4. Knowledge can influence adherence to preventive measures.

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ABSTRACT

Objective: to understand the social representations elaborated by nursing students about the prevention of COVID-19. Method: exploratory-descriptive and qualitative research. Data were produced through interviews with 32 participants, conducted in the period from September 2021 to July 2022. The Study Setting was a public higher education institution, located in the northeastern region of Brazil. Data were processed using IRaMuTeQ software. Results: the genesis of the social representations of COVID-19 prevention pointed to two axes: Organization of ideas about COVID-19 prevention measures, and Efficiency, reliability and source of the information obtained. Final Considerations: the social representations showed the knowledge about the prevention measures of COVID-19, provided an opportunity to clarify the origin of the students' knowledge and the specificities they consider important. It is hoped that this study can serve as a foundation for further research and/or interventions with nursing students.

DESCRIPTORS: Psychology, Social; Students, Nursing; Disease Prevention; COVID-19; SARS-CoV-2.

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INTRODUCTION

The emergence of the COVID-19 pandemic has caused significant changes in teaching and learning modalities on a global scale. This reality led nursing courses to abruptly remove students from hands-on clinical experiences in healthcare facilities, due to both concerns for these students and faculty members who could be exposed to SARS-CoV-2. In this context, these institutions have primarily adopted remote teaching, synchronous and asynchronous, mediated by videoconferencing platforms[1].

In Brazil, due to the pandemic context, through Administrative Rule no. 343, dated March 17, 2020, it was authorized, on an exceptional basis, the replacement of on-site classes in progress by classes using information and communication media and technologies within the limits established by the legislation in force by higher education institutions that are part of the federal education system[2].

On June 16th, 2020, Administrative Rule no. 544 revoked the above-mentioned rule and, besides approving the substitution of presential classes by classes using digital media during the pandemic situation, it provided guidance on how to proceed for courses where internships or practices in specialized laboratories were required, in other words, mainly contemplating health courses[3].

Regarding Social Representations, the concept was first introduced by Serge Moscovici in 1961, in the work entitled *La Psychanalyse*: *Son image et son Public*, which has a second revised edition published in 1976. Moscovici describes the relationship between representations and communicative influences, defining representations as a set of values, ideas, and practices that have two functions: the first is to establish an order that will allow people to orient themselves in their material and social world and to control it; the second is to allow communication among the members of a community by providing a code to name and classify the various aspects of their world and their individual and social history[4].

Thus, the study of the Social Representations Theory (SRT), which deals with how people interpret reality, that is, how they create explanations for social objects, can provide knowledge called common sense, used in everyday experience[5]. As well as it can demonstrate the perception of those involved, serving as a guide to action and reading of reality, allowing to interpret the course of events and social relations by expressing the relationship that individuals and groups have, once they are forged in the interaction and contact with the discourses in circulation in the public space, being inscribed in the language and in the practices[6].

Moreover, bearing in mind the paragraphs, COVID-19, although recent, tends to be considered a phenomenon that generates Social Representations (SR), since it can arouse affections that trigger discussions and positions of individuals and social groups, mobilizing the circulation of information within these relationships, with the meanings and images about COVID-19 conveyed by the media, favoring its formation. Besides verifying a projective dimension of the disease in other groups of belonging, based on social identity, with the different behaviors of the population expressing a socio-symbolic logic that guides social practices[7].

Considering the pandemic context that changed the teaching modality and caused adaptation difficulties, an understanding of the social representations developed mainly by nursing students becomes necessary. It is noteworthy that nursing students were one of the groups most impacted by the pandemic, as they left face-to-face teaching for remote teaching, which hinders the development of practical skills and clinical attitudes, necessary for the exercise of the profession[1,8].

Therefore, the use of SRT can enable the understanding of what is known about preventing COVID-19, as well as the effect of this knowledge on nursing students. Thus, to

guide the research, the following question was chosen: "What are the social representations elaborated by nursing students about the prevention of COVID-19?" adopting as an objective: to apprehend the social representations elaborated by nursing students about the prevention of COVID-19.

METHOD

This is exploratory-descriptive research, with a qualitative approach, which used Serge Moscovici's Theory of Social Representations as a theoretical reference[4,9]. Moreover, the Consolidated Criteria for Reporting Qualitative Research (COREQ) instrument was used to guide the methodology[10].

The interviews were conducted by a nurse, at the time of collection, studying for her master's degree in nursing, and by an eighth-period nursing student who, at the time of collection, was also a student representative. These interviewers, before the collection, were remotely trained by three professors with doctoral degrees.

The research setting was the nursing department of a public higher education institution, located in the northeastern region of Brazil. The invitation to participate was made via WhatsApp™, first disseminated in the group of student representatives by the interviewer and, subsequently, in the groups of the classes by the representatives.

The total number of research participants was 32 students, selected by convenience, whose number was closed when the researchers identified the presence of redundancy in the collected answers, in other words, when theoretical saturation occurred[11-12]. In the present study, none of the invited students refused to participate.

Inclusion criteria were being a nursing undergraduate; being 18 years old or older; and being regularly enrolled in the institution studied. Exclusion criteria were students on leave due to illness or leave of absence during the period of data collection.

The data were produced through interviews, conducted individually using the meeting and videoconferencing platform, Google Meet™, from September 2021 to July 2022. It is noteworthy that, during the first contact of the interviewers with the potential participants, clarification about the ethical aspects, the need to sign the term and general clarifications about the research and scheduling of interviews was already carried out.

The interview was guided by a semi-structured instrument divided in two parts: the first with the characterization of the participants, and the second with five open questions, approaching the students' knowledge about the prevention of COVID-19. Before the final application of the instrument, a pilot test was carried out to check the coherence and comprehension of the guiding questions, which was also included in the research. All the meetings were recorded (duration of forty minutes on average) and transcribed for the construction of the text *corpus*[13].

During transcription, the interviewees were identified by means of the letter "D", followed by numbering from one to 32, according to the sequence of interviews, so that the first interviewee received the denomination D1, the second D2, and so on, aiming to ensure the anonymity of the participants.

The data were processed with the help of the software IRaMuTeQ (*Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*), lexically analyzed using the Descending Hierarchical Classification (DHC) method and generating a dendrogram[13]. To wit, IRaMuTeQ is a free software, anchored in the statistical environment of the R software and in the python language; its use enables different types of textual data analysis, such as the DHC method, which performs lexical analysis of the textual material, offering contexts,

also, called lexical classes, where each class presents vocabulary like each other, while presenting vocabulary different from the other classes[14].

After the elaboration of the dendrogram, the researchers returned to the questions and the corpus to perform the naming of the classes. After the nomination, discourse analysis was performed, considering the DHC and SRT, to explore the complexity of the participants' answers and correlate with aspects inherent to the theory.

The research was approved by the Research Ethics Committee (REC) of a university in northeastern Brazil under opinion number: 4,778,840.

RESULTS

Of the 32 nursing students, 22 were female and ten were male, the age of the participants ranged from 18 to 27, highlighting the age from 21 to 23 years (56.3% - mean: 21.4 and median: 21); and of single marital status (100%). We included students who entered in: 2015 (3.1%); 2017 (25%); 2018 (6.3%); 2020 (34.4%); and 2021 28.1%), and most of them participated in academic activities related to COVID-19 (71.9%).

Regarding speeches, IRaMuTeQ recognized the separation of the corpus into 120 elementary text units, from 154 text segments. A total of 5,307 occurrences were registered, using 77.92% of the total corpus. From the descending hierarchical classification, the textual domains were analyzed and interpreted to give meaning to the axes and classes. The segments used were divided into two main axes and six classes, as shown in Figure 1.
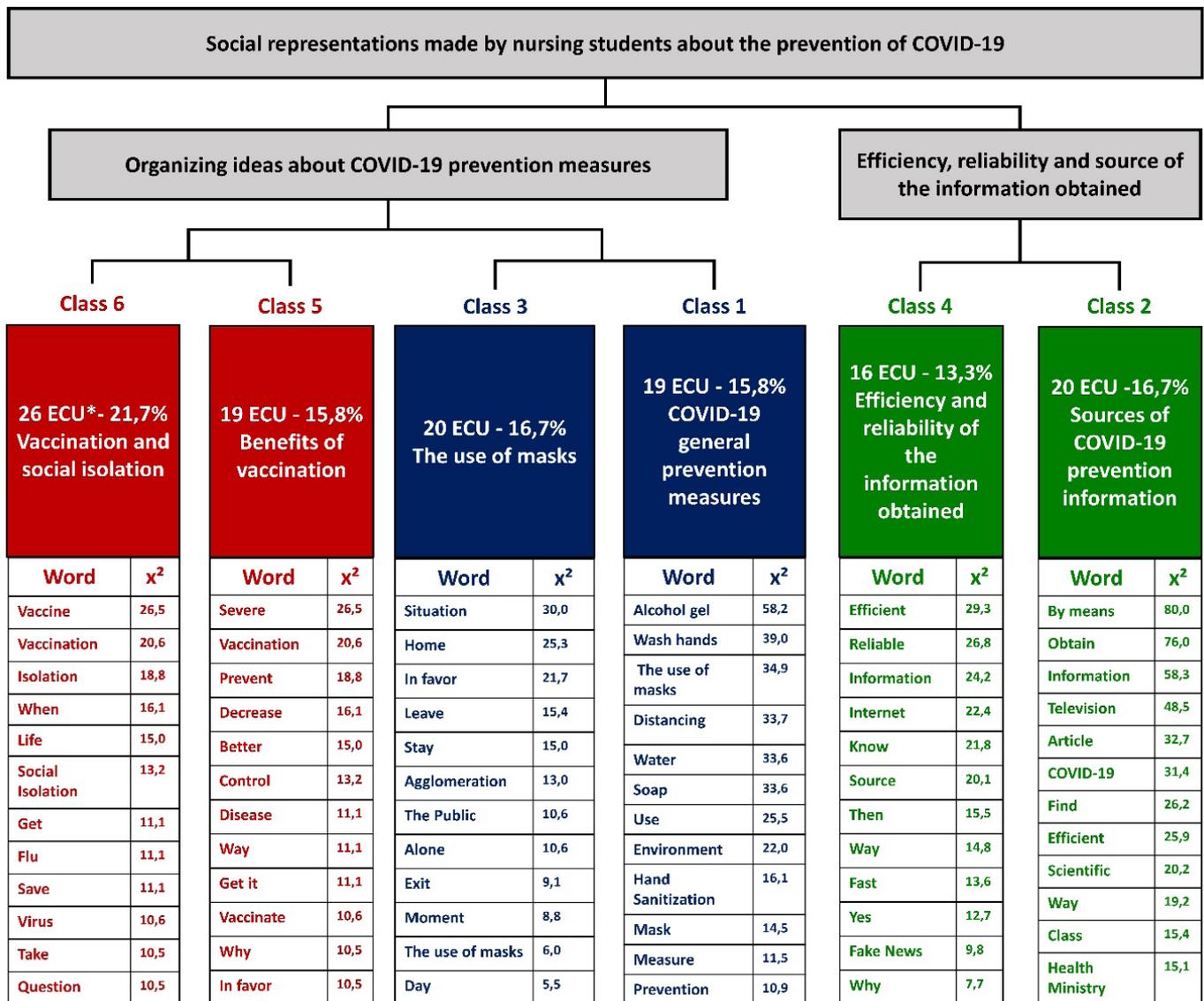
The genesis of the social representations of the prevention of COVID-19 pointed to two axes, these being: the "Organization of ideas about the prevention measures of COVID-19", and the "Efficiency, reliability and source of the information obtained".

The organization of ideas about COVID-19's prevention measures was represented on the first axis, in classes six, five, three, and one. Starting with class six, the learned knowledge approached two prevention measures, namely, the vaccine/vaccination and social isolation. Thus, it was noted that the students represented these two measures, mainly by issuing justifications for the implementation of both. In the case of vaccines, the students justified their implementation by attributing to them the ability to save lives. Regarding social isolation, the students favored the implementation, but justified the implementation according to specific situations.

In favor of social isolation in crowded situations, in a certain place you can't isolate 100% because there are other issues outside, including psychological ones, and you need to have contact with others, social isolation works to contain the spread of a virus [...] in favor of vaccination against COVID-19 because it saves lives (D3).

In favor of social isolation in contagious situations, when the person has the virus, he/she must isolate him/herself so that he/she does not transmit it to anyone else, and the people with whom he/she had contact, who live with him/her must participate in this isolation [...] in favor of vaccination because vaccines save lives (D13).

Thus, it was evident, in relation to both measures, that with the existence of the vaccine, the students, despite agreeing, represented social isolation as a less necessary measure in the current context. Moreover, a possible objectification of representations about social isolation was observed, where its concept was often confused with the concepts of quarantine and distance.

Figure 1 - Thematic structure of the social representations elaborated by nursing students about the prevention of COVID-19. Teresina, PI, Brazil, 2022

Legend: *ECU = Elementary Context Unit.

Source: The authors (2022).

In sequence, largely related to class six, class five also addressed vaccination, but limited to specifying its benefits, as can be seen in the following speeches.

[...] the vaccination against COVID-19 is the only way to end the pandemic or at least control it, since the higher the number of people vaccinated, the lower the risks, even if they get infected, the lower the probability of death and severe symptoms (D1).

Vaccination is very necessary, our best tool today to control COVID-19 because it will decrease the transmission factor, decreasing the transmission decreases the cases, so there will be less severe cases, and we will be able to take care of the cases that are simpler and will not die for nonsense (D7).

Therefore, it is noted that the students represented the vaccination as one of the best forms of prevention and control of COVID-19 by allowing the minimization of symptoms considered severe, preventing, consequently, the worsening of the disease.

In this way, class three dealt mainly with the use of masks, with the students being in favor of this use and exemplifying, especially, when they should be used, where besides being in favor of the use of masks, they included themselves as implementers of this measure in the daily routine, using it indispensably when leaving home.

In favor of the use of masks and in any situation that is outside your residence where you will have contact or will be close, or anywhere that has agglomeration (D8).

I use masks in all situations, especially when I leave home, inside the house, not so much, but if I have any symptoms, I use a mask (D25).

Being directly related to class three, in class one, the students again expressed the need to use masks and distance, but this time, also addressing other prevention measures for COVID-19. In this way, the students' knowledge was learned, mainly about the prevention of the transmission of infection by contact, highlighting the hygiene of the hands, by washing with soap and water or by using alcohol gel.

[...] constant use of masks in environments where COVID-19 is easily contagious, also the use of alcohol gel on the hands and hand hygiene, washing hands constantly (D26).

The use of face masks, use of alcohol gel, and every time we touch any surface, we must wash our hands with alcohol gel or soap and water, avoid places where there are many people, avoid touching our eyes, nose (D30).

It is also noteworthy, in the speeches mentioned above, that the representations of students may have subsidized the decision-making because when addressing the prevention of COVID-19, they included themselves as practitioners of the measures.

The second axis addressed the efficiency, reliability, and source of the information obtained, generating classes four and two. Thus, the students represented in class for the concern with efficiency and reliability in times of Fake News where information is propagated quickly, especially when using the Internet.

Regarding the media, the most efficient, safest, and most reliable are the open TV newspapers because it was there that they transmitted the information, sometimes in real time and updated daily, but on the Internet several Fake News appeared, information that we went to check did not match reality (D23).

If the person is not careful to research, to find out if this news is true, he or she may end up falling for Fake News believing it and also spreading this false information to other people (D28).

Thus, it was learned in the speeches mentioned above that the Internet is a source of information that deserves attention due to the unreliability of its information. Moreover, in class two, the students addressed in their speeches other sources that, according to the dendrogram were: television, articles, classes, and the Ministry of Health.

I got information through television, the internet, through news, scientific articles, doing research and academic studies on the subject (D19).

I got information about COVID-19 through scientific articles, national and international, during classes of the course itself, as well as courses from the ministry of health, courses offered by other institutions (D32)

Therefore, when considering classes four and two, it is noted that the Internet and television were described as fundamental to obtain information about the disease. In other words, they influenced the creation, evolution, and transformation of social representations, considering that communication is the cradle and the outlet of social representations.

DISCUSSION

At the beginning of the COVID-19 pandemic, lacking vaccines or specific remedies, different preventive measures were mainly encouraged by the World Health Organization (WHO) to avoid exposure of the population to SARS-CoV-2[15].

Furthermore, due to the emergency and the lethal nature of the COVID-19 pandemic, the time for vaccine design and development has been reduced from about 15 years to approximately one year. Thus, health agencies began to encourage mass vaccination as soon as possible as well[16].

Considering the results of this article, it was noted that the students assimilated these measures when representing them in their speeches, generating the first axis. Consequently, in the speeches apprehended from class six, it was noted that the participants issued justifications for the vaccine/vaccination and social isolation, whose findings were related, mainly, to the creation of the vaccine, for which, social isolation became a form of prevention less necessary.

Therefore, the students favored vaccines/vaccination due to the attribution of the ability to save lives. In this context, the fact that vaccines are efficient and have been responsible for the eradication of smallpox, a disease that caused the death of about 400 million people in the 20th century alone, and that Brazil has had the National Immunization Program (PNI- in Portuguese) since 1977, may have favored the anchoring and, consequently, the formation of this representation[17-18].

The various benefits of vaccines were present in class five, with the students imagining vaccines to prevent virus infection and minimize severe symptoms, explaining the relationship with class six. Also in class six, it was noted that participants issued justifications for the implementation of social isolation, demonstrating favorability in specific situations. However, in the formulation of these representations, it was noted the possible objectification of the concepts of isolation, quarantine, and social distancing, considered synonyms by the students.

Thus, isolation is the separation of people who are sick with contagious diseases to protect those who are not infected, performed mostly in hospital settings. Quarantine, being the restriction of movement of people who are presumed to have been exposed to a contagious disease but are not sick due to non-infection or because they are still in the incubation period, and social distancing, which aims to reduce interactions between people in a wider community where individuals may be infectious, but have not yet been identified and, consequently, have not yet been isolated[19].

In class three, the students represented the use of masks as an important measure for COVID-19 prevention, using them routinely. This finding is congruent with data from a survey, which interviewed and tested 122,647 individuals from 133 cities that cover all the federative units in Brazil, and which had as results the finding that these participants believed in the masks as a protective measure, adhering to their use, especially the fabric masks[20]. It is noteworthy that the mandatory use of masks imposed by most Brazilian states and municipalities may also have influenced the formation of this representation[21].

Linearly, in class one, they learned mainly about the prevention measures for contact infection, not failing to address the distancing and use of masks, explaining the close relationship with class three. Thus, the main finding of this class is that, besides summarizing the prevention measures encouraged by health agencies, the students were included as implementers of these measures. In this context, the literature denotes that the pandemic COVID-19 served as a warning for the strengthening of hand hygiene, previously restricted to health services, and that it started to be widely used in the community, so that at the beginning of the pandemic it caused an abrupt shortage of supplies[22].

On the second axis of the dendrogram, it was apprehended about the efficiency, reliability and source of the information obtained. Thus, in classroom 4 the focus of the participants was on the sharing of Fake News and the need for discernment when faced with the information obtained. In the context of COVID-19, the fake news was shared mainly through the Internet, addressing false information related to the speeches of health authorities, therapeutics, prevention measures, disease prognoses, and vaccination[23].

When considering the relationship between classes four and two, the influence of the Internet and Television (TV) on the students' representations was evident. This finding is based on the occurrence of increased use of TV, Internet-connected devices, and apps during the beginning of the pandemic, where most of the population was confined to their homes to prevent the spread of the virus[24]. The influence of articles may be related to the large production and availability of scientific and substantiated content about COVID-19, which subsidized strategies to combat the pandemic, as well as were necessary for the creation of training courses, such as those offered free of charge by the Ministry of Health of Brazil, another source of knowledge[25-26].

When analyzing the social reality shared by the students, it was noticed that they have knowledge about the forms of prevention of COVID-19, being favorable to them, in such a way that they have implemented them in their daily lives, which may be related to the concern of this group with the efficiency, reliability, and source of the information obtained. Moreover, the influence of the media in the formation of the representations is notorious. Namely, social representations trigger action, thought, and language in their primordial functions of making the unfamiliar known, enabling communication and obtaining control over the environment in which one lives[27].

The limitations were related to the intrinsic characteristics of the qualitative methodological approach, directed to an in-depth study with nursing students from a single educational institution and the impossibility of making inferences about the characterization of the participants, making it impossible to extend the results to other locations. This limitation favors the need for further studies that address the theme presented from the perspective of other audiences, such as students from other institutions, public or private, from other courses in the health area, to confirm or confront the findings of this research.

FINAL CONSIDERATIONS

The social representations developed by the nursing students generated six thematic classes, showing the students' knowledge about the prevention measures for COVID-19, which were: vaccination, social isolation, use of masks, distance, and handwashing, by washing with soap and water or using alcohol gel.

Therefore, when apprehending these representations, we noticed the occurrence of discussions, as was the case of the implementation of vaccination/vaccination and social isolation; positioning, where the students favored preventive measures, as well as clarification about the origin of the knowledge of the students and specificities they consider important, such as efficiency and reliability of the information obtained.

Thus, it is expected that this study, based on the SRT, can contribute to the clarification of the theme, by demonstrating that social representations can have a direct impact on the effective adherence of nursing students to individual and collective preventive actions, indicating that the measures were implemented properly and together, favoring the reduction of vulnerability to illness and contamination by SARS-CoV-2 in this group.

Furthermore, by clarifying the origin of the knowledge, it is hoped that this study can serve as a starting point for new research and/or interventions that seek to encourage both

knowledge related to the prevention of COVID-19 and to the prevention of other diseases in the group studied.

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