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# Perception of elderly people about vaccination against COVID-19

Percepção da pessoa idosa sobre vacinação contra COVID-19

Percepción de la persona adulta mayor sobre la vacunación contra el COVID-19

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# ABSTRACT

**Objective:** To analyze the perception of the vaccination process and the vaccine against Covid-19 in elderly people living in a city in the interior of the state of São Paulo. **Methods**: Exploratory and descriptive qualitative analysis carried out between January and March 2022 with elderly people from the city of Americana-SP. The interviews were recorded, transcribed, organized and analyzed using content analysis with the aid of Interface of R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires. **Results:** 25 elderly people were interviewed, predominantly female; married; They had completed high school and were between 60 and 69 years old. Four thematic classes were identified: 1 - Vaccine hesitancy; 2 – Search for Spirituality to face the pandemic; 3 - Infodemic and Covid-19; 4 - Impact of the vaccine on the daily life of elderly people. **Final considerations:** There was a positive perception about the vaccination campaign and its importance in the media for its dissemination. However, some were hesitant about the importance of the vaccine.

Descriptors: Aged; Geriatric Nursing; Coronavirus Infections; Vaccines; Perception.

## RESUMO

**Objetivo**: Analisar a percepção sobre o processo de vacinação e a vacina contra a Covid-19 em pessoas idosas que vivem em uma cidade do interior do estado de São Paulo. **Método**: Exploratório e descritivo de análise qualitativa realizado entre janeiro a março de 2022 com pessoas idosas da cidade de Americana. As entrevistas foram gravadas, transcritas, organizadas e analisadas por meio da análise de conteúdo com auxílio do *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*. **Resultados:** Entrevistou-se 25 pessoas idosas, predomínio do gênero feminino; casadas; tinham ensino médio completo e estavam na faixa etária de 60 a 69 anos. Identificou-se quatro classes temáticas: 1 - Hesitação vacinal; 2 – Busca por Espiritualidade para o enfrentamento da pandemia; 3 - Infodemia e Covid-19; 4 - Impacto da vacina no cotidiano da pessoa idosa. **Considerações finais:** Houve percepção

positiva sobre a campanha de vacinação e sua importância nos meios de comunicação para a sua divulgação. Entretanto, alguns hesitaram sobre a importância da vacina.

Descritores: Idoso; Enfermagem geriátrica; Infecções por coronavirus; Vacinas; Percepção.

#### RESUMEN

**Objetivo:** Analizar la percepción sobre el proceso de vacunación e la vacuna contra el Covid-19 en la persona adulta mayor que vive en una ciudad del interior del estado de São Paulo. **Métodos:** Exploratorio y descriptivo de análisis cualitativa realizado entre enero a marzo de 2022 com personas adultas mayores de la ciudad de Americana, las entrevistas fueron grabadas, transcritas, organizadas y analizadas por medio del análisis de contenido con auxilio del *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*. **Resultados:** Se entrevistaron 25 personas adultas mayores, predominio do genero femenino, casadas, con educación secundária completa y estaban en el grupo de edad de 60 a 69 años. Se identificó cuatro clases temáticas: 1 – Dudas con la vacunación; 2 – Búsqueda por la espiritualidad para el enfrentamiento de la pandemia; 3 – Infodemia y covid-19; 4 – Impacto de la vacuna en la rutina de la persona adulta mayor. **Consideraciones finales:** Hubo percepción positiva sobre la campaña de vacunación y su importancia en los medios de comunicación para su divulgación. Sin embargo, algunos dudaron sobre la importancia de la vacuna.

Descriptores: Anciano; Enfermería Geriátrica; Infecciones por Coronavírus; Vacunas; Percepción.

#### INTRODUCTION

In March 2020, the World Health Organization (WHO) declared that the world was experiencing a Covid-19 pandemic, an acute respiratory disease caused by the Sars-Cov-2 virus. In the world, the first case was registered in China, in the city of Wuhan, in December 2019; and in Brazil, the first case was in February 2020 in the city of São Paulo, coming from an elderly man after returning from a trip to Italy <sup>(1)</sup>.

Over time, cases increased considerably: by September 4, 2022, 604,175,257 cases had been recorded worldwide, 6,494,847 deaths and 12,152,650,666 vaccinated <sup>(2)</sup>. In Brazil, information states that 34,456,145 cases and 684,262 deaths were recorded due to Covid-19, in addition to 471,817,937 vaccinated <sup>(2)</sup>.

Therefore, a high number of deaths among elderly people was observed, due to a decrease in functional reserve, immunosenescence and chronic diseases, making them more vulnerable to the virus. In Brazil, data indicate that elderly people have a high mortality rate, at 69.3%, and of these, 64% had shown some risk factor <sup>(3)</sup>.

Given the global epidemiological situation and the establishment of risk groups for the virus, a vaccine against Sars-Cov-2 was sought in order to reduce the number of cases and protect those most vulnerable to the disease. The vaccine works as an active form of immunization by introducing the inactivated or attenuated pathological agent into the individual, so that the immune system receives the vaccine and is stimulated to produce antibodies <sup>(4)</sup>.

In the Brazilian context, the vaccines against Covid-19 on the market are: Pfizer/BioNTech (United States/Germany) with 95% efficacy; Moderna (United States), with 94.5% efficacy; Sputnik V (Russia), which is 91.6% effective; AstraZeneca/Oxford (United Kingdom), with 82.4% efficacy; Coronavac (China) which has an overall efficacy of 50.38%, 78% for mild cases and 100% in severe and moderate cases; and Jansen (Belgium) with an efficacy of 66% and have different mechanisms of action <sup>(5)</sup>.

Since several pharmaceutical companies have developed vaccines against Covid-19, countries around the world are competing to buy vaccines and immunize their populations as quickly as possible. In the West, the first countries to start vaccination were Russia and the United Kingdom in December 2020. Brazil, in turn, started its campaign on January 18,

2021 and by October 4, 2022 Brazil had around 81% of its population immunized with the second dose and 63.5% immunized with the third dose <sup>(6)</sup>.

Thus, after two years of the pandemic and the start of vaccination in the country, people developed different perceptions about the campaign process against Covid-19. In this sense, perception can be defined as "the act of perceiving, the action of mentally forming representations about external objects from sensory data" <sup>(7)</sup>. Therefore, perception can be understood as the way in which the individual interprets the reality in which he or she is inserted, based on a critical analysis of sensory stimuli received.

In this context, a study in Australia was carried out with the aim of understanding the public's perceptions regarding a future vaccine against Covid-19. Carried out with 1,420 participants, the researchers identified that those interviewed generally have positive opinions regarding vaccination. Furthermore, 80% agreed with the statement that getting vaccinated would be a good form to protect themselves against infection and identify strategies that will support engagement <sup>(8)</sup>.

In Brazil, among the factors that influenced the perception of elderly people about vaccination were fake news disseminated, mainly on social networks, which were spreading quickly, and cast doubt on the credibility of health authorities, the effectiveness and safety of vaccines against Covid-19<sup>(9)</sup>.

Therefore, with the advancement of the pandemic, and consequently, of fake news, the number of people who disbelieved in important institutions in the area of health and science increased, while adherence to behaviors necessary to prevent the disease decreased <sup>(10)</sup>. This situation is unusual in the country, since, thanks to the National Immunization Policy, vaccination is part of Brazilian daily life and little was questioned about the effectiveness of vaccines <sup>(11)</sup>.

Therefore, in Brazil, information about different vaccines, and in some cases, the misinformation that elderly people may receive through different means of communication or from their own family members, leads to doubts about the vaccine, which can result in low adherence. of vaccination. In this sense, the study will address the understanding of how elderly people faced the vaccination process against Covid-19 and their fears and concerns in this regard. Consequently, the following study question was formulated: How do elderly people perceive the vaccination process and the Covid-19 vaccine?

#### **OBJECTIVE**

To analyze the perception of the vaccination process and the vaccine against Covid-19 in elderly people living in a city in the interior of the state of São Paulo.

#### **METHODS**

Exploratory, descriptive and qualitative analysis study carried out with elderly people who live at home and attend the Centro Espírita Paz e Amor located in the city of Americana. The location was chosen because it is attended mainly by elderly people who could meet with protection and safety measures. This study followed the recommendations of the Consolidated criteria for reporting qualitative research (COREQ)<sup>(12)</sup> for writing this article.

The spiritist house was founded in 1947, being the first Kardecist spiritist center in the city of Americana. Currently, the place operates from Monday to Saturday and offers courses and study groups on spiritualism, mediumistic meetings, evangelization, spiritual pass shifts and volunteer work, such as delivering food baskets. Among the visitors to this center are people of different age groups, approximately 70 people.

To participate in the study, the the following inclusion criteria were applied: age equal to or over 60 years old, of both sexes, regular at the center and able to communicate verbally.

The exclusion criterion was that the elderly person had some sensory (auditory) deficit and/ or needed help to communicate verbally.

The estimated population of the study was made up of elderly people from different age groups (60 - 69; 70 - 79; and 80 or more) totaling 25 participants who attend the Spiritist Center; there was no exclusion of participants. To begin collecting information, elderly people who attend the center were first invited to participate in the study. For those who agreed to participate, it was necessary to schedule a day and time to interview them in person at the Spiritist Center, in a quiet place provided by those responsible for the location, and following social distancing measures and protocols for the prevention of Covid-19.

The interviews were carried out by a single interviewer between January and March, 2022 and were recorded with prior authorization and stored for later transcription. The interviewer was previously qualified and trained by the study coordinator and each interview lasted an average of 40 minutes.

To direct the interviews, an instrument was used that consisted of two sections. The first, used by the research group, aimed to obtain sociodemographic information such as gender, age, marital status, education, religion, date of vaccination, number of doses and the type of vaccine the elderly person received.

The second section was composed of questions that guided the interview with the elderly person. Before starting the research, a pilot interview was carried out and the responses were analyzed with the aim of achieving the objective and which was not part of the final sample. The questions asked in the interview were: What did you think of the pandemic before the vaccine? How do you perceive the vaccination process in the city? Have you, at any point, had doubts about the vaccination campaign in the city due to lack of information? Why? Were you confused by the overflow of information about vaccination received on social networks, such as *WhatsApp*? When doubts arose, where did you seek clarification: Internet, health professionals, family members, or other means? At this time, do you think it is important to get vaccinated against COVID-19? Why? Given the immunization options offered by the public network, do you have/did you have any preferences? Why?

To build the textual database, the audios of the interviews were listened to and transcribed in full. Therefore, the contents were validated by the research coordinator with the purpose of standardizing terms in order to improve the analysis while respecting the words spoken by the participants.

In analyzing the interviews, the lexometric content analysis technique was adopted, which is capable of verifying the frequency of occurrence of words in a given text, which favors an approach based on frequency of the analyzed material <sup>(13)</sup>.

All the interviews were organized in a database and analyzed using the software Interface of R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires (IRAMUTEQ) 0.6 alpha 3, Brazilian version. Furthermore, the textual database was analyzed using the Reinert method, which generated the Descending Hierarchical Classification (CHD) with the purpose of indicating associated lexical contexts <sup>(14)</sup>.

The project had the consent of the director of the Spiritist Center and was approved by the Research Ethics Committee of the School of Nursing of the University of São Paulo, complying with Resolution 466/2012 of the National Health Council when involving human beings in research.

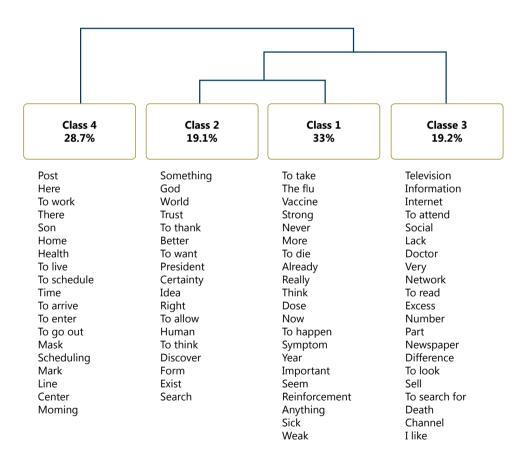
#### RESULTS

Were interviewed 25 elderly people, predominantly female (84%), married (52%), aged 60-69 years (60%), followed by those aged 70-79 years (28%) and 80 years or more (12%), with a minimum age of 60 years and a maximum of 85 years.

Regarding religion, there was a predominance of spiritualist elderly people (56%), followed by Catholics (40%) and Muslims (4%). Furthermore, the participants stated that they had completed secondary education (24%) and incomplete primary education (25%). As for the vaccine, elderly people who took the 3rd dose of the COVID-19 vaccine were 64%, followed by those who took the 2nd dose at 36%.

The corpus consisted of 25 interviews and divided into 1,436 text segments, which contained 48,623 occurrences, 4,037 analyzable forms and 1,959 words that appeared only once in the text or hapax, which corresponds to 48.53% of the analyzable forms and 4.03 % of occurrences.

In the lexical analysis of the texts, a dendrogram was formed that demonstrated the classes formed by the 1,272 (88.58%) segments of analyzable texts (Figure 1). Thus, four classes emerged, which were categorized based on the theoretical framework and named as: Class 1 – Vaccine hesitancy; Class 2 – Search for Spirituality to face the pandemic; Class 3 – Infodemic and Covid-19; and Class 4 – Impact on the elderly person's daily life.





Using the words obtained, the classes were categorized with the help of literature, which are described below:

Class 1 – Vaccine hesitancy: In this class, feelings related to the vaccine and frequent doubts they had about it were identified in the participants' statements, according to the statements expressed below.

She (daughter) always said: 'you have to take (the vaccine), because it really is for the best', things like that. And I was a bit like that, at first I was reluctant, I said: 'I'm not going to take it!, but I confess that I only took it after I read the book by Divaldo Pereira Franco (a famous medium in the spiritist community). (I 9)

I was afraid of taking the vaccine, afraid of something affecting an organ or having something (bad). I heard so many things and I felt like that. (I 11)

I was a little afraid that the vaccine could cause some type of disease. It was this doubt, this fear that I had, and I'm already over 70 years old, almost 80, so I had this doubt. (I 21)

Class 2 – Search for Spirituality to face the pandemic: In the participants' statements, the importance of God is evident as a way of facing or refuge from difficulties and fears throughout the pandemic:

I also believe that chance does not exist. You can already have an idea that the one who knows everything and sees everything, who knows us in depth, will not allow us to go through a situation that is not necessary". (I 1)

Because my fellow man is my brother, we are all children of God and we are all brothers and everyone has the right to the best, so I wish much light and much peace for planet earth... for all the inhabitants of the planet and that everyone be happy! And may those who have lost their loved ones have faith in God because God knows what is best for each one of us. (I 5)

*Trying to believe in what we thought was best and especially that God was greater and that he would be there doing the work for all those who were fighting.* (I 10)

Class 3 – Infodemic and Covid-19: With the beginning of the pandemic there was an enormous amount of information in different media that caused both positive and negative feelings and concern in the elderly population:

Then you found out it was a lie; There have never been so many lies, so much fake news, so many contradictory things. Mixing it with politics, with the way of thinking, it really confused me. (I 15)

But I spend a lot of time here at home, so I turn on the television. I'm against not vaccinating, every piece of fake news appeared, every single one that passed, and I read everything, today I no longer keep a lot of things, I end up forgetting them but I saw every single thing that was a lie. (I 20)

In fact, it's a bit tiring for those who follow it every day. They (the media) do it, the media, make information or give information and then they tire this information out day and night, and of course there are television channels, for example, which only show this, they spend the whole day massacring, so you turn on at noon, you turn on at ten o'clock, at any time you hear a specialist, you hear another, the same questions reformulated and reheated, it gets a little tiring. (I 23)

Class 4 - Impact on the daily life of elderly people: The pandemic changed the routine of elderly people who had to stay at home to protect themselves from the virus, but after the vaccine they were able to leave the house, but with care to avoid becoming infected.

I will not go to the public fair and run the risk of being contaminated or contaminating anyone, under any circumstances. I didn't go to the fair for two years, but this week two patients changed their schedule in the morning so I went to the fair, it was wonderful to go to the fair, wonderful! It's okay, we don't have the same pattern of behavior anymore, so you used to meet someone you know and hug you, today we don't have that anymore. (I 8)

It's the first day that I'm coming, my children will say I couldn't leave the house, but I can't stand staying at home any longer, I'm used to working, but I can't stand staying at home

any longer, you know? We go carefully, with a mask, when we get there everyone is wearing a mask and everyone is a distance away, we have to be careful, there is no such thing. (I 16)

Well, for starters, I didn't leave the front door for 6 months, my son did the shopping for me, but he didn't even come in here, I opened the door: 'hi hi' he left everything there at the door and left, I say that and I get emotional, because it was very hard, very difficult for your son to come to your door and not enter your house, you can't give him a hug. (I 21)

#### DISCUSSION

In Brazil, in recent years a downward trend in vaccination coverage was observed. According to the WHO, vaccine hesitancy refers to the delay or refusal to be vaccinated despite the availability of the recommended vaccines<sup>(15)</sup>. This phenomenon of hesitancy in Brazil can be explained by the success of public policies and the effectiveness of vaccines, which generate a false sense of security that vaccine-preventable diseases no longer exist, and therefore, active immunization is not necessary, or that the risk of the disease is lower than the risk of adverse effects from the vaccine<sup>(16)</sup>.

In the context of Covid-19, age is a relevant determinant in cases of mortality and severity, therefore the vaccine is essential to protect individuals over 60 years of age. The study Protecting Older People: a high priority during the Covid-19 pandemic corroborates this importance: in Shanghai, more than 90% of deaths of elderly people that occurred during the Sars-Cov-2 virus outbreak were those who were not vaccinated; in Hong Kong, 84.6% of deaths among elderly people were unvaccinated or with an incomplete vaccination schedule with just one dose <sup>(17)</sup>. Therefore, it is extremely important to encourage vaccination and understand the reasons that lead to vaccine hesitancy among older people.

Accordingly, hesitancy involves several complex issues, such as cultural, geographic, psychosocial, economic, religious, political aspects, cognitive factors, gender, level of education, available information about the vaccine, its benefits and adverse effects <sup>(18)</sup>. Among the elderly people interviewed, factors such as little research time for the development of the vaccine, excess information, Fake News, doubts about the functioning and effectiveness of the vaccine were determining factors for vaccine hesitancy.

Another important factor that contributed to hesitation was the lack of recognition and seriousness in confronting the pandemic by the federal government. A study investigated the impact of speeches of the president and his allies on the population and it was noted that regions that had greater acceptance of the government had less adherence to social distancing measures when compared to regions where support for the federal government is lower <sup>(19)</sup>.

Furthermore, the lack of confidence in the vaccine is also related to sociocultural changes that have resulted in the increase of groups that disbelieve in science, protocols from respected authorities, and the pharmaceutical industry <sup>(20)</sup>.

Despite this study was performed with elderly people from a city in the interior of the State of São Paulo, vaccine hesitancy among this age group is not a local particularity, as international studies demonstrate. A study carried out in Turkey found that the main factors that influenced vaccine hesitancy were: some participants believed that the media exaggerated the pandemic, confidence that they would not be infected by the virus, the pandemic is a conspiracy created by developed countries, that environmental pollution had no role in the disease, that the measures taken against the pandemic were inadequate and that individual measures against Covid-19 could not protect against the disease <sup>(21)</sup>.

Additionally, a study that analyzed vaccine hesitancy in elderly people in Hong Kong divided vaccine hesitancy into three factors: individual factors with lack of confidence in the vaccine, perception that the vaccine is dangerous, perception of low long-term efficacy, perception from vaccine ineligibility, peer pressure and weak social networks; microsocial factor related to stigma on health professionals; and a factor at an intermediate social level with the lack of trust in the government <sup>(22)</sup>.

In the second class there is the search for God to cope with the pandemic. During the aging process, religiosity and/or spirituality can intensify in a person's life, as it is a way of facing the challenges of this age group, such as losses and biopsychosocial changes attributed to age <sup>(23)</sup>.

In addition, given the health risk that the pandemic has brought to older people, the presence of religiosity may also be associated with the search for a better lifestyle. According to the study Religiousness and lifestyle among Europeans in SHARE, the presence of religiosity among elderly people is related to better habits, such as not consuming alcohol, smoking and better sleep <sup>(24)</sup>.

In this context, it can be said that religiosity is the practice of a certain religion, while spirituality addresses more philosophical issues, such as understanding the finiteness and meaning of life, understanding the essence, among others <sup>(25)</sup>. Therefore, among the interviewees, the presence of spirituality was noted as a way of supporting, accepting and making sense of the obstacles presented throughout the pandemic, such as social isolation and the loss of family and acquaintances.

Thus, the importance of spirituality and religiosity in the lives of elderly people as a way of coping with the pandemic is notable. Stimulating this aspect in the lives of individuals in this age group can also minimize negative impacts, such as mental illnesses, social isolation in the lives of elderly people, in addition, it promotes important ties with members of the religious community with a feeling of belonging and emotional support <sup>(23)</sup>.

In the context of the pandemic, it is noted that religious and spiritual practices and beliefs were protective instruments that enabled well-being, adaptation and overcoming difficulties. Moreover, they are considered protection and strength factors that influence resilience, acceptance of everyday life, comfort due to suffering and pain due to loss <sup>(26)</sup>.

In the third class, Infodemic and Covid-19, it is possible to observe the great impact of excess information on the lives of elderly people. Social networks were used as the main source of information about the pandemic around the world; Also, the media played a fundamental role in disseminating news from reliable entities and authorities, with the aim of providing the population with true information, in order to help with vaccine acceptance <sup>(27)</sup>.

Nonetheless, although the media and social networks were very important for research participants as a form of clarifying their doubts and being informed about news on the campaign and the epidemiological situation in the country, those vehicles were also a reason for generating doubts, concerns and hesitations about the vaccine.

Although infodemic, an expression used to describe the phenomenon of excess information and the rapid dissemination of news about a certain event or problem, which culminates in the difficulty of resolving the situation <sup>(28)</sup>, is not something that began with the advent of pandemic, without a doubt, but was intensified with its arrival. The intensification of the infodemic during the years of social isolation, in turn, leads to negative impacts, such as the increase in the dissemination of fake news and harmful repercussions on the mental health of elderly people <sup>(29)</sup>.

Hence, a study was conducted on the repercussions on mental health and the Covid-19 infodemic of elderly people in São Paulo, in which 411 elderly people participated in the research. The results revealed that the majority were exposed to information received via the internet (45.3%); which made it difficult to control channels to stop the spread of fake news, generating feelings of fear, anxiety and depressive symptoms among participants <sup>(30)</sup>.

Despite the efforts of organizations such as the WHO and media platforms to combat and deny false information about the pandemic and the Covid-19 vaccine, the large volume of misinformation still had negative consequences among older people. The current infodemic is a crisis to distill the vast amount of information, which is occurring at four levels being: science, policy and practice, news media and social media<sup>(31)</sup>.

At last, class 4, impact on the daily life of elderly people, represents the change in the lives of elderly people caused by the pandemic. This impact, according to the participants' statements, can be related to pre-vaccine life, in which routine was affected due to social isolation, and also the change in behavior and daily life after the vaccine and the return to "normality".

The change in the daily life of elderly people is related to the fear of contamination by Covid-19. In the study on the perception of fear of being infected by the new coronavirus carried out with 920 participants, 64% said they were afraid of contamination <sup>(32)</sup>.

As a result, the harmful impact of social distancing on the mental health of older people is undeniable. An essential factor in improving the quality of life among elderly people during isolation is communication, consequently, the use of social networks increased significantly during the pandemic. However, social media can also negatively affect the mental health of that age group due to excessive information and Fake News <sup>(33)</sup>.

Another negative impact was the damage to physical health due to the lack of exercise, less exposure to sunlight, which plays a fundamental role in regulating bone metabolism, less demand for health services, decreased income with increased inequality and social vulner-ability in this population <sup>(32-33)</sup>.

As a limitation of the study, it is worth stressing that the research was carried out in a spiritualist center that could have encouraged the emergence of a class related to religion and/or spirituality. Furthermore, the results cannot be generalized to the general elderly population. However, it is considered that the findings express the perceptions of elderly people during the Covid-19 pandemic, contributing to the understanding of this population by health professionals in future situations.

#### FINAL CONSIDERATION

During the pandemic, elderly people had doubts and hesitations about the Covid-19 vaccine due to excessive information and fake news received in the media. As a reflection, many participants sought spirituality as a way of coping with the impact of the pandemic on their daily lives, their questions and hesitations.

In spite of that, participants had a positive perception regarding the vaccination campaign and its importance for resuming normality and the possibility of resuming activities carried out before the pandemic, besides acknowledging the importance of different means of communication for publicizing it.

Therefore, as elderly people were and are a risk group for Covid-19, it is essential that nurses are aware of the perception about the vaccine, in order to clarify doubts and promote vaccination effectively, as these professionals have a role of extreme importance in the vaccination process, as they work directly in campaigns, through continuous supervision and training of the nursing team, in patient guidance, in addition to being responsible for the vaccination room.

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