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Health Beliefs about COVID-19 Vaccination in the Geriatric Population

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ABSTRACT

The Health Belief Model seeks an explanation for the lack of public participation in prevention programs; and as we get older, we are more exposed to different diseases, some of which, thanks to the development of vaccination schedules, can be prevented. However, due to the increase and dissemination of false beliefs, many people are against it.

In March 2020, the WHO declares an emergency situation due to the number of COVID-19 cases, with high morbimortality rates affecting mainly the elderly, thus arising the need for a vaccine, generating beliefs towards it, either by ignorance, uncertainty and / or influence of third opinions, influencing its application.

A total of 128 people were surveyed, of whom 50% were vaccinated and 50% were not; of those not vaccinated, they did not want to be vaccinated (45.7%) because of fear of adverse effects (32.7%), because they did not trust (26.5%), and because of lack of information (38.8%). On the other hand, of those vaccinated, 71.2% felt safer, 19.7% felt the same, and 9.1% felt less safe.

The lack of information about vaccines as well as the yellowing of the adverse effects has increased the population that refuses to be vaccinated, increasing morbidity and mortality.

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INTRODUCTION

"Better safe than sorry", this proverb is known almost worldwide. The prevention of infectious diseases through the use of vaccines is the most useful medical invention of the modern era. Not surprisingly, the invention of vaccines has improved the health care system worldwide. (1)

It is well known that as adults get older they are more exposed to different diseases, some of which can be prevented through vaccination (2).

The risk of contracting them, as well as developing severe cases, can be easily prevented by vaccination. The latter is variably recommended depending on several factors such as current health status, age, lifestyle, epidemiological aspects, exposure to risks such as work and/or travel. Very different from children, where the almost exclusive factor is age (2-8).

Vaccine development has reached adults and older adults, who previously were not considered target groups for vaccines because they had outlived childhood, and most of the diseases at risk had already been overcome. Consequently, overall coverage in older adults and medical personnel was very low (8-11).

In addition to this, various beliefs have become increasingly common in society regarding vaccines and despite the efforts that have been made for decades to promote vaccination, the ideas against them have been increasing in a worrying way, even reaching the aggression of medical personnel who are in such campaigns (12-14). Even reaching the aggression of medical personnel who are in such vaccination campaigns (12-14).

MATERIAL AND METHODS

Quantitative, observational-descriptive study. A form was distributed through the Internet to collect information on the perception of the vaccine in adults aged 55 years and older. A sample of 128 people was taken who met the inclusion

criteria, which were that they were of age, had access to the internet, were able to answer the survey on their own, and if not, that there was a person willing to help them answer the survey. They were given the option of having the questions read by a younger person in order to record their information, where they were asked: sex, age, schooling, if they had already received the vaccine, how they felt when they were vaccinated, if they will receive the vaccine if they have not yet received it, and if not, why they will not be vaccinated. The exclusion criteria were: not meeting the required age, not having access to the internet, not being able to read the survey, and not having someone who could help them answer. The data were collected automatically using Google Forms so that they could be plotted later.

THEORETICAL FRAMEWORK

The 2019 coronavirus disease outbreak (COVID-19), caused by severe acute respiratory syndrome type-2 virus (SARS-CoV-2), was declared a pandemic in March 2020. Lethality rates were estimated between 1% and 3%, affecting mainly older adults and those with comorbidities such as hypertension, diabetes, cardiovascular disease and cancer, so the need arose for the development of a vaccine as soon as possible, in order to immunize the population, however, the production of these are limited, and will be distributed prioritizing populations at higher risk, including the geriatric population.

At the end of February 2020, Mexico announced its first cases of COVID-19. Over the next few weeks, cases multiplied and the epidemic moved into its next phases. For millions of Mexicans, the option to stay at home and take shelter was never viable, due to the fact that more than 50% of its population works in the informal sector and has variable income, without social benefits and additionally, several sectors of society did not believe in the existence of the virus.

The general population, with all this situation, generates various beliefs regarding the vaccine, due to several factors, either by ignorance, uncertainty and influence of other people's opinions. That is, different beliefs in the health system. Influencing thus, in their decision making; in question of applying or not the vaccine (15-18).

We know that vaccination and its application is of great importance because it not only creates a better quality of life, but also makes the chances of suffering some kind of disease decrease partially or totally. For this reason, it is necessary to raise awareness of how important it is, not only in times of risk but also for prevention.

Because of this situation we decided to do this study, to know each of the beliefs in the population, specifically in the older adults, and if based on them they think to go to the application of the vaccine or if they have already been applied.

The realization of this study is based on knowing what factors influence the different beliefs of people, as well as to know what position prevails in the decision to apply or not the vaccine, but for this we will first define what is the model of belief about health.

The Health Belief Model proposed in 1974 by Becker and Maiman was a model created and developed during the 1950s seeking an explanation for the lack of public participation in early detection and prevention programs (15-18).
The model states that a person's disposition to adopt a health behavior will be determined by two factors: the perception of susceptibility to illness and the perceived severity of the consequence of the illness (15-18). (15-18).

Since vaccination has been implemented, there have been groups against it, even going so far as to attack medical personnel attending vaccination campaigns in order to prevent their implementation. (19,20)

Some of the factors found that may affect the judgment to get the vaccine are age, educational level (the lower the level of education, the less likely to believe that the vaccination is effective), accessibility to the vaccination service and fear of adverse effects of vaccines (21).
All of these factors have led to people of geriatric age, who are prioritized for the vaccine, not wanting to get the vaccine for any of the reasons listed above. (22)
It is of utmost importance to determine if these factors can really influence the reduction of morbidity and mortality due to this virus.

Immunity as we know is defined as the physiological mechanism of the immune system to respond quickly against any infectious or non-infectious agent that has the ability to alter the homeostasis of the organism (23).
This term was first used in connection with immunology in the plague epidemic of 430 B.C. when it was seen that those who had survived the disease were able to help the sick without fear of being infected again. (23)
A vaccine is defined as a preparation that aims to expose the host's immune system to a specific pathogen in order to generate immunological memory, with which it can efficiently face subsequent infections caused by the same pathogen. (23) They were created by Edward Jenner and extended thanks to Louis Pasteur based on the fact that the infectivity and virulence of a pathogenic organism could be reduced after placing it in adverse conditions or by making successive passes, which today is known as attenuation, by being able to create attenuated organisms, protection could be given without causing disease. (23)

DISCUSSION

The Health Belief Model states that a person's disposition to adopt a health behavior will be determined by two factors: the perception of susceptibility to illness and the perceived severity of the consequence of the illness (15-18). (15-18).

From the sample of 128 people, it was observed that 50% are vaccinated against those who are not, of which, on the part of

the unvaccinated, the majority do not want to be vaccinated in 45.7% where it was observed that the great part is due to their beliefs about the vaccine in 59.2%, dividing the parts by the fear they have of the possible adverse effects and demonstrated in 32.7%, and because they simply do not trust the vaccine in 26.5%; taking into account that 45.3% received up to basic education, 29.7% obtained a high school education, and only 25% obtained a degree with higher education; obtaining, among other reasons for not wanting to be vaccinated, that of not having enough information about the vaccine in 38.8%, so it was concluded that schooling is inversely proportional to the false beliefs, where the more education, the fewer misconceptions, and the less education, the greater the false beliefs.

On the other hand, of those who were vaccinated, 71.2% felt safer, 19.7% felt the same way, and 9.1% felt less safe; arguing that those who felt less protected, were possibly vaccinated for 2 main reasons: influence of third parties where they were convinced to apply the vaccine despite not fully trusting it, and/or having suffered from some symptomatology, adverse effect or reaction after the application of the vaccine.

CONCLUSION

The culture of prevention in Mexico is quite deficient, this has become more noticeable in the SARS-CoV-2 pandemic. The lack of information about vaccines as well as the yellowing of the adverse effects of vaccines has caused the population that has little or no access to complete information about them to refuse to get vaccinated. Not only making mortality even higher, but morbidity increases exponentially.

A correct dissemination of information, as well as avoiding false or inconclusive information notes could be the key to make vaccination campaigns even more effective in these vulnerable groups that are so susceptible to notes that can make them choose to be vaccinated and thus avoid future complications from this virus.

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