

Knowledge and Perception of the Use of a Face Mask as a Preventive Measure for Respiratory Diseases in Leon Nicaragua 2020

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ABSTRACT

World Health Organization recommends the use of face masks, especially for people in their 60s and patients with chronic diseases. They also specify that masks misused or alone are worthless, which should be used within an integral strategy. The objective was to describe the knowledge and perception of the use of face masks as a measure of disease prevention, it was a qualitative phenomenological study, conducting 30 in-depth interviews, the content analysis method was carried out showing lack of knowledge about the face mask and its purpose, this conditions that the population does not use it. The perception of safety when wearing a mask is positive, they consider that to handle it properly they must have a general cleaning of hands and protective equipment. As disadvantages they consider that it hinders breathing capacity, mainly when they perform activities such as walking, they also refer due to many faces mask is "thin and do not protect much". The people refer that they are not yet adapted to the face mask, does not allow them to speak comfortably, but they are seen in the need to make use of them when they go to places that demand their use.

Keywords: Face Mask; Knowledge; Perception; Prevention; Respiratory Diseases

Introduction

World Health Organization recommends general use of cloth face masks if there is no physical distance and recommends surgical face mask for people over 60, people with chronic diseases, as well as health workers or those working in medical facilities. They also specify very clearly that masks misused or alone are worthless,

which should be used within an integral strategy [1]. Since the global emergence of COVID- 19 disease caused by coronavirus SARS-COV - 2, the face mask has become a regular item among people. In each country where the virus has reached its use it became popular associated with the idea of protection [2]. In

Latin America, coronavirus was expected to reach its magnitude of contagion during the months of June to August 2020, strict measures have been taken in this regard, with the use of mandatory face masks being one of the main measures to prevent the spread of respiratory diseases [3].

In Nicaragua, Vice President Rosario Murillo has proposed social distancing and the use of masks since April, explaining that people with respiratory symptoms, health personnel, people caring for vulnerable people, the sick in the family should be used [4]. The Association of Private Banks of Nicaragua from May requires its clients to use face masks to ensure that the mouth and nose are covered to enter the banking facilities and to receive face-to-face services" [5]. Regarding the development of research into the use of mask, in 2020 the Institute for Evaluation of Technologies in Health and Research, studied the community use of non-medical masks (common, simple, fabric, homemade), in the context of COVID-19. In their conclusion they recommend the community use of masks in general population because much of the community transmission of the virus can occur as a result of the existence of infected people who do not have symptoms [6].

In 2020 Mario Alejandro Jiménez Mora studied the use of cloth face masks in the general population to control the transmission of COVID-19, finding increasing evidence on the effectiveness of the cloth face masks to prevent respiratory infections in healthy people and reduce their transmission by symptomatic patients [7]. The use of masks according to the ATLANTA CDC provides a false perception of safety when not accompanied by proper hand washing, and this false perception of safety can increase when people improperly manipulate masks and come into contact with dirty surfaces [8]. Even if a face mask is used, it is also necessary to apply and use all other protective measures that exist, in addition, it is important to use them well, that is, that they fit the face well, not touch or move them too much, and always use the other protective measures [9].

The motivation for this study was due to the current epidemiological situation where the population is facing an epidemiological threat of respiratory transmission, an alternative response has been the use of face mask but is still immersed under many dilemmas mainly by inadequate knowledge and the perception negativized by the general population [10]. Currently there are no recent studies on the proper use of face masks in Nicaraguan population, no existing information was found regarding the knowledge and perception of the use of face masks. For all that situation, the following research question arises:

What is the Knowledge and perception of the use of face masks as preventive measure for respiratory diseases in patient of a primary health care center in Leon Nicaragua?

Objectives

General Goals

Describe knowledge and perception of the use of face mask as a measure of prevention of respiratory diseases in patients of a primary health care center in the city of León, Nicaragua in the months of July to September 2020.

Specific objectives

- a. Identify knowledge of the use of face mask as a measure of prevention of respiratory diseases.
- b. Determine the perception of use of face mask.

Materials and Methods

This research is of a quantitative type under the phenomenological perspective, this study prioritizes the description and interpretation of the essence of lived experiences, recognizes the meaning and importance of the different areas in the knowledge and perception of participants about the use of the face mask according to their own experiences. This method constitutes rigorous and consistent processes of the ethical dimensions of everyday experience, difficult to access by other common methods of research [11]. The study was conducted in the Carlos Núñez primary health care center, is located in the indigenous neighborhood of Sutiaba, this health center has primary care services that mainly cover, health promotion and disease prevention which is divided into health and care education in priority programs, which are governed by nursing personnel who are: prenatal control, family planning, detection of cervical cancer, low-risk birth care, postpartum, immunization, comprehensive child care monitoring growth and development, micro nutrients, immunization, oral rehydration therapy, daily serving a target population of 50-100 people mostly children, is tasked with providing services to a number of communities and wards divided into 7 semi-urban sectors [12].

The study was developed between July and September 2020, including 30 patients enrolled in the Carlos Núñez health unit, the selection of the population was random calling for the participation of people attending medical consultations in the health unit. Information was obtained through a semi-structured interview with participants who met the following inclusion criteria: Being enrolled in the Carlos Núñez health unit, being over 21 years old, agreeing to participate voluntarily. To prevent the bias of the collected data, health professionals, health workers, health career students attending the health unit as patients were excluded. For information gathering, a letter was sent to the Head nurse of the Health Unit requesting permission to visit the care center, and to be able to address patients and conduct the interview. For access

to patients was established on Wednesdays as the busiest day of visits to the health unit, to have variability in the responses the simple interval selection method was performed by capturing one patient every five individuals to be interviewed, this was done until reaching the saturation of information.

Before conducting the interview, the ethical criteria and the importance of their participation in this study were explained to understand the phenomenon of the use of face masks in front of the current pandemic situation of COVID-19 and the benefits that it would bring to the scientific community and the patients themselves to be able to understand this situation, we respect the ethical criteria. The technique implemented for information collection is in-depth interview, this interview was a semi-structured instrument with 13 questions according to the variables in studied, during the collection of information the interview was recorded with a mobile device with android 7.0 MPSS operating system. JO.c2.1-00022-8937_GENNS_PACK-1 in which the Just Press Record Voise-Quik recording program was used. The interview was divided on 4 topics: Sociodemographic Data. General of the epidemiological situation by COVID 19, Knowledge of the use of face masks, perception of the use of face masks.

For data processing, the recordings were filed in the Microsoft Word program, the document was cleaned, and the information was analyzed under the content analysis technique according to Laurence Bardin applying the set of communications analysis techniques aimed at obtaining indicators by systematic procedures and objectives of describing the content of messages allowing inference of knowledge regarding the conditions of production/ receipt of these messages. 10 As a starting point for analysis, comparative matrix was made by locating the conceptual responses of the participants, comparing them with the theoretical background of the document in order to understand the context in which situations occur and explain or generate a new content of the phenomenon. The ethical aspects that led to this investigation were Informed Consent, Anonymity, Confidentiality and Autonomy

Results and Discussion

The population interviewed is characterized by being mostly female, with the most frequent etareo group being 26 to 30 years, followed by 31 to 35, most of which is an academic level of secondary school being considered as an middle education which

would facilitate the understanding of communication strategies on the use of the face mask and other protection measures against COVID 19. More than half of the participants are married, 15 of them have 1-2 children, this situation could condition the increased use of face mask while they go out to do their daily work, but it was observed that most did not carry any type of face masks so it does not correspond to previous research results where people with children more frequently implement the use of face mask to protect their families from the contagion of SARS Cov 2 (Tables 1-4).

Table 1: Sociodemographic data of patients enrolled in the Carlos Núñez primary health center.

Indicator	Value	N
Sex	Male	6
	Female	24
Etereo Group	18-25	5
	26-30	7
	31-35	6
	36-40	2
	41-45	1
	46-50	4
	51-57	4
Academic Level	Illiterate	1
	Primary	10
	Secondary	14
	University	5
Marital Status	Single	13
	Married	17
Children	None	3
	2-Jan	15
	3 a mas	12
Religion	Catholic	11
	Evangelical	16
	No Religion	3
Occupation	Housewife	14
	Trader	6
	Home Assistant	2
	Worker	6
	Teacher	1
	Evangelical Pastor	1

Table 2: Prevention measures known to respiratory diseases such as COVID 19.

Response	Theory	Analysis
<p>“Cover your mouth and nose with mask and wash your hands constantly in addition to keeping your distance.”</p> <p>“The use of the permanent face mask where there is agglomeration and maintaining social distancing.” “Don’t say hello to anyone or when you go to the market wash your fruit, don’t hug people.”</p> <p>“Change your clothes when you come from the street, your shoes”</p> <p>“Wash hands, wash everything with chlorine and alcohol”</p> <p>“By sneezing or coughing cover, me with my forearm”</p>	<p>Wash hands frequently and use handkerchiefs or elbow to cover your nose and mouth when coughing or sneezing. As for the use of face masks it is essential to use them if it is infected, suspects that it may be or is in direct contact with patients who carry the virus [12].</p>	<p>The public’s knowledge of the prevention measures to be used against the pandemic is adequate, focusing on hand washing, social distancing, avoiding crowded places and the use of face mask, this may be due to the massive information campaign on the prevention of COVID 19 contagion through the different media led by the Ministry of Health of Nicaragua and the World Health Organization, this is expressed in phrases such as: “Cover your mouth and nose with mask and wash your hands constantly in addition to keeping your distance” and “the use of the permanent face mask where there is agglomeration”</p>

Table 3: Steps you consider when wearing a face mask.

Response	Theory	Analysis
<p>“I wash carefully my hands in case any bacteria or virus is sited, clean my face and put the face mask covering my nose and mouth”</p> <p>“I wash my hands, use alcohol gel, after I do that, I grab the face mask and put it covering the mouth and my nose”</p> <p>“Don’t touch it with a dirty hand, just touch it by the garters”</p> <p>“Grab the sides and put it without touch the center and also not pull it through the center”</p> <p>“I wash it with chlorine when I’m going to use it, spray with alcohol the face mask and put it on”</p> <p>“I take the face mask and I put it on trying not to touch the center it with my hand”</p>	<ul style="list-style-type: none"> • Wash your hand before touch the face mask. • Place the mask thoroughly to cover the mouth and nose. • Do not touch it while wearing it. • Do it you with the right technique. • After inadvertently removing or touching a used cloth face mask, wash it with water and soap. • If the mask is wet, replace it with a clean, dry mask. • Nor reuse single-use masks. • Immediately discard single-use masks once used [6]. 	<p>Knowledge about the proper use of the mask in this population is limited, demonstrate mastery of how to wear it, providing great relevance to hand washing or sanitization with alcohol so as not to contaminate them before use, when wearing it they take it properly at the ends and place it covering nose and mouth, but do not refer knowledge about the handling during its use, in addition disinfect the mask with alcohol, being an ineffective measure, because it must be changed every 4 hours or when it presents moisture, the reuse of these without proper disinfection increases the risk of infection of COVID 19.</p>

Table 4: Advantages and Disadvantages You’ve Experienced when wearing a face mask.

Response	Theory	Analysis
<p>“It protects us more and we don’t make our relatives sick”</p> <p>“If you use it all the bacteria stay in the mask gives you less quick disease”</p> <p>“Feeling a little more comfortable than without that protection”</p> <p>“Do not contaminate the other” “I drown I get in the way I feel like I lack the air can’t breathe well”</p> <p>“The face mask suffocates me, especially when I’m walking”</p> <p>“Some face masks are very thin and don’t protect so much”</p> <p>“It Give me allergy; it has little breathing enters”</p> <p>“It doesn’t allow us to show facial expressions when we talk”</p> <p>“The face mask alone does not guarantee us safety”</p>	<p>Advantages: Face Masks can be considered a complementary means to existing measures to reduce contagion.</p> <p>Cloth face masks can be easily produced, washable and reusable.</p> <p>Disadvantages: Lack of evidence that non-medical masks are effective against contagion. There are population groups that do not tolerate them, such as children.</p> <p>The possible appearance of skin lesions of the face, irritative dermatitis or worsening of acne when the masks are used for many hours [1].</p>	<p>In the advantages participants recognize the use of face mask as a protective measure that prevents them and their families from getting sick because it is a barrier to pathogenic microorganisms, that makes them perceive a sense of comfort, in addition they show empathy by not contaminating other people.</p> <p>As for the disadvantages they consider that it hinders breathing capacity, mainly when they perform activities such as walking, they also refer allergy and feeling of discomfort, they recognize that just wearing the mask does not guarantee safety, due to many face mask are “thin and do not protect much”, another disadvantage is that it affects communication in personal interaction because it does not allow facial expressions when it is conversed being this a very important element in Nicaraguan idiosyncrasies.</p>

Conclusion

This research was carried out with the aim of describe knowledge and perception of the use of face mask as a measure of prevention of respiratory diseases, with a total population of 30 participants, 24 of them female, predominates the ages of 26 to 30

years, the minimum age of 18 and the maximum age of 57 years. The predominant academic level is incomplete high school, the marital status 16 of them are married, 15 have 1-2 children, the main occupation was housewife followed by merchants. It shows the lack of knowledge about what a face mask is and its purpose

conditioning that the population does not use it. They have a misconception in the difference between face mask and mouth covering, they recognize more that of cloth mask and surgical mask, they argue to know only the type of face mask that they frequently use for their protection. They do not know the proper use of the mask, having a misconception of how to prevent it from being contaminated at the time of use and how to discard it, yet they know some steps to follow when wearing and removing the face mask.

The perception of safety over the use of the face mask as a tool to prevent respiratory diseases is positive, they know that to handle it properly they must have a general cleaning of hand and protective equipment. The population refer that the face mask causes them injuries and that they are not yet adapted to it, does not allow them a good conversation and that for them it is important to see facial expressions in a conversation, but they are seen in the need to make use of them when they go to places that demand it. It was observed that the mostly participants did not make use of the face mask at the time of the interview, they were asked why not to use it and referred that they were forgotten to bring them, that they had them dirty and that they did not like to use them, it was concluded that despite not using it they know that it is a necessary tool and that it provides security against COVID 19 infection.

Recommendations

To the General Management of the Carlos Núñez Primary Health Center

Strengthen health promotion strategies in counseling and vocational guidance programs provided to patients.

Encourage the specific and continued use of the medical mask by health workers in areas of confirmed or suspected community transmission of COVID-19. Implement a standard of continuous use of the mask by patients attending the Carlos Núñez Primary health center. Prioritize education for respiratory disease prevention on an ongoing basis to both new patients entering and already enrolled in the primary health center.

To the Health Care Personal of the Carlos Núñez Primary Health Center

Plan educational talks on the use of masks as a respiratory disease prevention measure. Provide clear and understandable information about the characteristics, use, handling and disposal of the mask using teaching materials such as slides, videos, dynamics, images among others. Develop health education activities on the use of masks in patients enrolled in the Carlos Núñez Primary health center.

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