

Perceived and objective knowledge of health academics about measles vaccination

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Conocimiento percibido y objetivo de los académicos de la salud sobre la vacunación contra el sarampión

RESUMO

Objetivo: Analisar o conhecimento percebido e objetivo de acadêmicos da saúde sobre a vacinação contra o sarampo. Método: Estudo descritivo, transversal e quantitativo, realizado com 223 acadêmicos de enfermagem e medicina das Instituições de Ensino Superior públicas do município de Picos-PI, através de questionário on-line. O conhecimento percebido foi avaliado pelos acadêmicos, e o conhecimento objetivo avaliou oito quesitos e foi classificado em: adequado (7 a 8 acertos), regular (4 a 6 acertos) e inadequado (0 a 3 acertos). Resultados: Em maioria, os acadêmicos apresentaram a percepção de ter um bom conhecimento sobre a temática (56,1%); e assim, sentem-se confiáveis para disseminar informações sobre a vacinação (67,7%). Contudo, 44,4% tiveram o conhecimento objetivo classificado como regular. Conclusão: Os acadêmicos avaliaram ter bom conhecimento percebido sobre a vacinação, no entanto, tiveram conhecimento objetivo classificado como regular. Portanto, verifica-se a necessidade de estudos com foco nas dificuldades do conhecimento sobre a temática.

DESCRIPTORIOS: Conhecimento; Estudantes de Ciências da Saúde; Vacina contra Sarampo; Imunização.

ABSTRACT

Objective: To analyze health academics' objective and perceived knowledge about measles vaccination. Method: A descriptive, cross-sectional, quantitative study was carried out with 223 nursing and medical students from public Higher Education Institutions in the city of Picos-PI, using an online questionnaire. Perceived knowledge was evaluated by the students, and objective knowledge evaluated eight questions and classified as: adequate (7 to 8 right answers), regular (4 to 6 right answers) and inadequate (0 to 3 right answers). Results: Most of the students had the perception of having good knowledge about the subject (56.1%); therefore, they considered themselves reliable to disseminate information about vaccination (67.7%). However, 44.4% had their objective knowledge classified as regular. Conclusion: The students thought they had good perceived knowledge about vaccination; however, they had objective knowledge classified as regular. Therefore, there is a need for studies focusing on the difficulties of knowledge on the subject.

DESCRIPTORIOS: Knowledge; Students, Health Occupations; Measles Vaccine; Immunization

RESUMEN

Objetivo: Analizar los conocimientos objetivos y percibidos de los académicos de la salud sobre la vacunación contra el sarampión. Método: Estudio descriptivo, transversal y cuantitativo, realizado con 223 estudiantes de enfermería y medicina de Instituciones de Educación Superior públicas del municipio de Picos-PI, a través de un cuestionario online. Los conocimientos percibidos fueron evaluados por los estudiantes y los conocimientos objetivos se evaluaron en ocho preguntas y se clasificaron como: adecuados (de 7 a 8 respuestas correctas), regulares (de 4 a 6 respuestas correctas) e inadecuados (de 0 a 3 respuestas correctas). Resultados: La mayoría de los estudiantes tenían la percepción de tener un buen conocimiento sobre el tema (56,1%); y, por tanto, se sienten seguros para difundir información sobre la vacunación (67,7%); embargo, el 44,4% tenía sus conocimientos objetivos clasificados como regulares. Conclusión: Los estudiantes evaluaron tener un buen conocimiento percibido sobre la vacunación, sin embargo, tenían un conocimiento objetivo clasificado como regular. Por lo tanto, es necesario realizar estudios que se centren en las dificultades de conocimiento sobre el tema.

DESCRIPTORIOS: Conocimiento; Estudiantes del Área de la Salud; Vacuna Antisarampión; Inmunización.

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INTRODUCTION

Vaccination, considered essential for public health as it provides individual and collective immunity, is a safe action with an excellent cost-effectiveness ratio, as it interrupts the chain of transmission of a vast list of vaccine-preventable diseases. Among these, measles, a potentially serious acute viral disease, transmitted from droplets expelled when coughing, sneezing, talking or breathing, from infected individuals to people without immunity against the virus. 1

In Brazil, the Ministry of Health (MH) reported that in 2019, less than 70% of cities reached the Vaccination Coverage (VC) rate recommended by the MS, as reflected in previous years (2015-2019), where the goal for VC homogeneity of the first dose of MMR (D1) was not reached by Brazilian municipalities. Consequently, the MS recorded 18,203 cases of the disease in 2019, and, in 2020, reported seven deaths, in addition to another 8,442 cases, spread across 21 states of the federation in the five regions of the country, four of which remained at the end of 2020 active circulation of the virus. 2-4

In Brazil, the Ministry of Health (MH) reported that in 2019, less than 70% of cities reached the Vaccination Coverage (VC) rate recommended by the MS, as reflected in previous years (2015-2019)

In this scenario, the reemergence of measles in Brazil is mainly due to the drop in VC rates, possibly associated with the exorbitant dissemination of fake news that constantly intensifies to the point that approximately seven out of ten Brazilians believe in some false information related to the vaccination. 5

Health professionals present themselves as a group of great importance in immunization actions against this virus. To this end, the survey evaluated in 2018 the global perception of people about vaccines, and indicated that doctors and nurses are the main source of health information. Of the respondents who declared they "very much trust" these professionals, 87% agree or strongly agree that vaccines are not harmful to health, and they believe more in the safety of vaccines than those who prioritize other sources, such as friends, family, religious leaders and healers. 6

A study carried out in Brazil by the Brazilian Society of Immunizations (SBIm - Sociedade Brasileira de Imunizações), evaluated that people who receive negative news about vaccines on social networks, still tend to feel safe if they also have access to this information from doctors, nurses

and other reliable sources. . Therefore, the level of trust in doctors and nurses appears to be directly related to a better perception of vaccine efficacy and safety. 5

The study is justified because of the re-emergence of measles in Brazil and because it considers nursing and medical students as the group that will later integrate the team of professionals that shows greater relevance in credibility, trust and dissemination of information to the population about the importance of vaccination, thus impacting vaccination coverage rates and, later, the incidence of vaccine-preventable diseases, such as measles.

In addition to the expected technical knowledge, it is considered that this group of professionals has a privileged position in information about vaccines, therefore, they must be qualified and evaluated as to what they think, as they are opinion makers for the population. This circumstance will directly result in adherence to vaccination, thus, these professionals must have a favorable perception and satisfactory technical knowledge on the subject. As a result, what is the perception and objective knowledge of these academics about measles vaccination?

It is noteworthy that objective knowledge is what is, in fact, known about a given subject at that moment and perceived knowledge is what the individual thinks he knows or how confident he is of what he thinks he knows, which can lead them to overestimate or underestimate their knowledge. 7

Thus, the objective is to analyze the perceived and objective knowledge of health academics about measles vaccination.

METHODS

This is a descriptive, cross-sectional and quantitative study carried out in the health courses of public Higher Education Institutions (HEIs) in the city of Picos-PI. The population consisted of 509 students from the Nursing and Medicine courses of the public HEIs in this municipality. A minimum sample of 219 participants was defined based on the calculation for cross-sectional studies with a finite population and qualitative variables. 8 The final sample had 223 academics, satisfying the minimum required of 219.

Data collection was carried out between August 2020 and April 2021, through a structured questionnaire through the online platform: Google forms. Contact with the academics took place via email, through which the researcher previously sent an invitation to participate in the research, providing an access link. To those who agreed to participate, the Free and Informed Consent Term (FICF) was initially presented, therefore, for those who agreed to confirm the FICF, the second stage was intended to fill out the questionnaire.

The students' perceived knowledge on the subject was evaluated as: excellent, excellent, good, fair or bad. Furthermore, the confidence in disseminating information and the perception of the need, safety and efficacy of the vaccine were questioned.

Objective knowledge about the vaccine assessed eight items: 1- name of the vaccine; 2- route of administration; number of doses; 3- for individuals up to 29 years old; 4- for individuals aged 30 years or older; 5- for health professionals; 6- minimum interval between doses; 7- contraindications; and 8- expected adverse events. From this, it was classified as: adequate (7 to 8 hits), regular (4 to 6 hits) and inadequate (0 to 3 hits). 9 Established as correct: "correct answer" and error: wrong answer or answer marked by the participant as "I don't know how to answer". 10

The collected data were tabulated and

analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0 software and organized into tables and graphs.

In order to contemplate Resolution No. 466/12 of the National Health Council, the study was submitted to the Research Ethics Committee of the Federal University of Piauí (CEP/UFPI), and was approved with opinion No.: 4,144,402 and CAAE: 33118920.2.0000.8057.

RESULTS

The study included 223 academics with a sociodemographic and economic profile characterized mostly by nursing students (87.0%), in the fourth year of the course (29.6%), female (74.4%), brown (53, 8%), single (91.9%), Catholic (55.6%), and with a median age of 22 years and a median family income of 2,000.00 reais.

Regarding the perceived knowledge about measles vaccination, 56.1% evaluated having a good knowledge on the subject, 67.7% considered themselves a reliable source to disseminate information about the vaccine, and 69.5% reported having already had it. some discipline in the course that addressed the content of vaccines. Furthermore, 92.4% expressed the perception that measles vaccination is very necessary, 63.2% that it is very safe and 65.9% that it is very effective. (Table 1).

As for the students' objective knowledge about the vaccine, 92.8% had knowledge about the name of the immunizer, 89.2% about adverse effects, and 71.3% about contraindications. Regarding the number

Table 1 – Perceived knowledge of academics about measles vaccination. Picos, Piauí, Brazil, 2021. N=223.

Variables	N	%
There was discipline in the course that addressed vaccine		
Yes	155	69,5
No	68	30,5
How do you consider your knowledge of vaccines?		
Excellent	5	2,2
Great	32	14,3

of doses, they scored correctly: 82.1% for individuals up to 29 years of age, 69.1% for individuals aged 30 years or older and 63.2% for health professionals. However, it was found that 45.7% did not have correct knowledge about the route of administration, the same percentage in relation to the minimum interval between doses (Table 2).

From the eight alternatives for characterizing objective knowledge (Table 2), it was classified that 44.4% of the students had regular knowledge about the measles vaccine. Then, 41.7% had adequate knowledge, while 13.9% had inadequate knowledge (Figure 1).

DISCUSSION

The present study analyzed the perceived and objective knowledge about measles vaccination of 223 nursing and medical students from public HEIs in the city of Picos-PI, using an online questionnaire.

The prevalence of nursing students in this research is justified because this course is offered in two public HEIs in the city under study, while the medical course is present in only one HEI and with only four classes in training. This is corroborated by the fact that among the courses in the health area, Nursing is the one with the highest number of enrollments in HEIs in Brazil. 11

The superiority of nursing students reflects on the disparity of participants by sex, since, historically, the nursing course is predominantly female, a reality that is the fourth in which there are more enrollments of women in public HEIs in Brazil, the first in the area of health, while among the 10 courses with the highest number of male enrollments, there is no course in the health area, thus confirming the superior representation of women in this study. 11

A survey that compared the social base of nursing and medicine courses in Brazil showed that the profile of brown, black and low-income students in these courses has increased, as a result of public policies for the expansion of higher education, such as the social and racial quotas, which substan-

Good	125	56,1
Reasonable	53	23,8
Poor	8	3,6
Do you consider yourself a reliable source for disseminating vaccine information?		
Yes	151	67,7
No	26	11,7
I don't know	46	20,6
Need for vaccine		
Much needed	206	92,4
Needed	16	7,2
Unnecessary	1	0,4
Vaccine safety		
Very safe	141	63,2
Safe	82	36,8
Little safe	0	0,0
Vaccine efficacy		
Very effective	147	65,9
Effective	76	34,1
Ineffective	0	0,0
Total	223	100,0

Source: Survey data.

Characterization of academics' objective knowledge about the measles vaccine. Picos, Piauí, Brazil, 2021. N= 223.

Knowledge	Correct		Wrong	
	N	%	N	%
Vaccine name	207	92,8	16	7,2
Route of administration	121	54,3	102	45,7
Number of doses for individuals up to 29 years old	183	82,1	40	17,9
Number of doses for individuals aged 30 years and older	154	69,1	69	30,9
Number of doses for health professionals	141	63,2	82	36,8
Minimum interval between doses	121	54,3	102	45,7
Contraindications	159	71,3	64	28,6
Adverse events	199	89,2	24	10,8

Source: Survey data.

tiates the profile of the participants presented in this study, who in greater numbers consist of mixed race and with a family income of 1 to less than 2 minimum wages.

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The median age was in the range of 22 years, thus counting on a younger population compared to other studies with this

same university group, which presented averages and medians of age in the range of 24 years, the same identified in the 5th National Profile Survey of HEI Graduates. Similarly, the predominance of single students and belonging to the Catholic religion was also prevalent in these studies. 13-15

The academics who composed the sample of this study presented a perception that the measles vaccine is very necessary, in addition to being very safe and very effective. This is reinforced by a survey carried out in Brasília, which showed that 98% of students in health courses were in favor of vaccination. On the other hand, a study carried out in Europe pointed out that health workers have shown reluctance regarding vaccination, alleging doubts about its effectiveness and real safety, in addition to suspicions of conflicts of interest between the pharmaceutical producers. 16-18

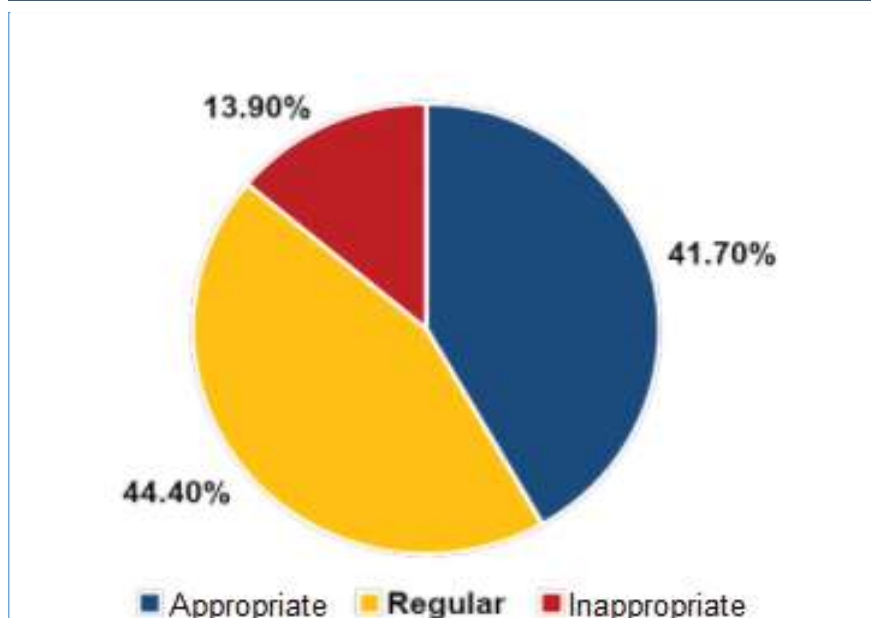
The perceived knowledge, classified as good in most of the participants in this study, stands out when compared to a study developed at an HEI in Recife (PE), which showed that most medical students have unsatisfactory perceived knowledge about the MMR vaccine (61.2%). 19

In this study, most students feel confident to disseminate information about vaccination, this outcome is fundamental to emphasize the autonomy of these future professionals when communicating information with the population about the safety and efficacy of vaccines. 18

The favorable findings regarding the perception of vaccination become important as studies have more frequently identified the practice or induction of vaccination hesitation by health workers, including those involved with vaccination. Although their motives do not differ from the general population, the need for further studies to understand their motives is reinforced, which will allow more specific and effective measures for this group. 18

A study carried out in the same place, however, with students about the HPV vaccine, showed that the main factors for vaccine refusal or hesitation are the lack of knowledge about the vaccine, added to the

Figure 1 – Classification of objective knowledge about the measles vaccine



Fonte: Dados da pesquisa.

fear of adverse effects. 20

One of the ways to intervene in the drop in vaccination coverage is evidence-based practice, in order to prevent errors in the administration of immunobiologicals from becoming presuppositions for the dissemination of fake news, and concomitant with the phenomenon of vaccine hesitancy. In this way, professionals who carry out the practice of vaccination must present satisfactory theoretical-practical knowledge.

However, in a specific way, wrong answers regarding the route of administration and the minimum interval between doses, presented considerable and curiously the same percentage value. Despite being directed to another immunizer, the unsatisfactory result was similar to the knowledge presented by nursing students about the human papillomavirus vaccine, reinforcing the low practical knowledge of academics in the administration of immunobiologicals. 21

Due to this, and the higher prevalence of nursing students, in which they have greater contact with the practice of vaccination, it was expected to identify more satis-

factory knowledge of which was presented.

In the state of São Paulo, a survey carried out at a medical school showed that 64.7% of medical students and 38.5% of physicians showed that they did not know the immunizers that make up the official vaccine calendar of the PNI (National Immunization Program). 22

Despite this, the students showed knowledge when asked about the possible adverse effects of the vaccine, with fever and erythema being the highlighted alternatives. This finding accompanies this investigation, which described fever and pain at the site of application as the most cited adverse effects by the sample of health academics who composed the study, and still, it assumes that the result is more associated with a particular reaction report, presented during some immunization process than with objective-scientific knowledge. 16

Health academics have a considerable impact on public policies, having the role of disseminator of information and health educator. Therefore, they must acquire a good theoretical basis about immunizers, in order to stimulate the fight against fake

news and improve the practice of care and preventive actions, promote health and provide evidence-based information to the population. 16

CONCLUSION

The analyzed academics evaluated ha-

ving a good perceived knowledge about measles vaccination, and thus, they felt confident to disseminate information to the population on the subject. However, objective knowledge about the vaccine was classified as regular.

Since the practice of the future professionals analyzed is closely linked to the im-

plementation of actions for the success of immunization, there is a need for studies focusing on the difficulties of knowledge on the subject, in order to reinforce teaching, aiming at strengthening the practice of vaccination, and consequent containment for the assumptions of the phenomenon of vaccine hesitancy.

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