

Educational workshop for Nursing students on teaching about vaccines**Oficina educativa a estudantes de enfermagem para o ensino sobre vacinas****Taller educativo para estudiantes de enfermería para la enseñanza sobre vacunas**

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Objective: to report the experience of an educational workshop on vaccines with Nursing students in the Supervised Internship discipline in Primary Health Care. **Methods:** descriptive study, of the experience report type, about an educational workshop, carried out with Nursing students in Primary Health Care, in June 2023. Aspects ranging from the cold chain, organization of the vaccination room and refrigerator, to vaccine administration techniques were covered, with the aim of understanding the weaknesses and strengths regarding the topic. An instrument composed of five multiple choice questions was used, which was applied before and after the educational workshop. The questions related to knowledge and application of vaccines. **Results:** 12 Nursing students and one Nursing technician participated. The educational workshop brought benefits to both participants and tutors, as it allowed them to learn about the difficulties faced by Nursing students and from this, the tutors were able to intervene and contribute to the training process and professional qualification. **Conclusion:** holding workshops is relevant in the training process of Nursing students, as it contributes to the improvement of knowledge that is involved in their training process. **Descriptors:** Primary health care; Professional training; Students, Nursing; Vaccination.

Objetivo: relatar a experiência acerca de uma oficina educativa sobre vacinas com estudantes de enfermagem da disciplina de Estágio Supervisionado na Atenção Primária à Saúde. **Método:** estudo descritivo, do tipo relato de experiência, acerca de uma oficina educativa, realizada com discentes de Enfermagem na Atenção Primária à Saúde, no mês de junho de 2023. Foram abordados aspectos desde a rede de frios, organização da sala de vacinas e geladeira, até as técnicas de administração das vacinas, com o intuito de conhecer as fragilidades e potencialidades a respeito da temática. Utilizou-se um instrumento composto por cinco questões objetivas, que foi aplicado antes e depois da oficina educativa. As questões eram referentes ao conhecimento e aplicação das vacinas. **Resultados:** participaram 12 acadêmicos de Enfermagem e uma técnica de enfermagem. A oficina educativa trouxe benefícios tanto para os participantes, como para os tutores responsáveis, pois permitiu conhecer as dificuldades enfrentadas pelos estudantes de enfermagem e a partir disso, os tutores puderam intervir e contribuir no processo formativo e qualificação profissional. **Conclusão:** a realização de oficinas é relevante no processo formativo de estudantes de enfermagem, visto que contribui no aprimoramento de conhecimentos que implicam no seu processo de formação.

Descritores: Atenção primária à saúde; Capacitação profissional; Estudantes de enfermagem; Vacinação.

Objetivo: informar sobre la experiencia de un taller educativo sobre vacunas con estudiantes de enfermería del programa Pasantía Supervisada en Atención Primaria de Salud. **Método:** estudio descriptivo que recoge la experiencia de un taller formativo realizado con estudiantes de enfermería de atención primaria en junio de 2023. Se abordaron aspectos que van desde la cadena de frío, organización de la sala de vacunas y nevera, hasta técnicas de administración de vacunas. El objetivo era conocer los puntos débiles y el potencial de la asignatura. Antes y después del taller formativo se utilizó un instrumento compuesto por cinco preguntas objetivas. Las preguntas se referían a los conocimientos y la aplicación de las vacunas. **Resultados:** Participaron 12 estudiantes de enfermería y un técnico de enfermería. El taller educativo aportó beneficios tanto a los participantes como a los tutores responsables, ya que les permitió conocer las dificultades a las que se enfrentan los estudiantes de enfermería y, a partir de ahí, los tutores pudieron intervenir y contribuir al proceso de formación y cualificación profesional. **Conclusión:** La organización de talleres es relevante para el proceso formativo de los estudiantes de enfermería, ya que ayuda a mejorar los conocimientos implicados en su proceso formativo.

Descritores: Atención primaria de salud; Capacitación profesional; Estudantes de enfermería; Vacunación.

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INTRODUCTION

Vaccination is an effective way of preventing diseases, as its application strengthens and prepares the immune system to defend itself against some microorganisms responsible for various health problems, such as viruses and bacteria¹.

In Brazil, the National Immunization Program (*Programa Nacional de Imunização - PNI*) was created in 1973. It is considered an important milestone for advances in public health, which aims to reduce the transmission of vaccine-preventable diseases, in addition to providing a better quality of life for people through disease prevention and, consequently, contribute to reducing mortality rates²⁻³.

Vaccination is carried out mainly in Primary Health Care (PHC), constituting the gateway to guarantee immunization, as well as the main responsibility for carrying out the PNI through the multidisciplinary team, promoting care with immunobiologicals, whether in storage, application and monitoring⁴.

From the perspective of preventing various diseases, one must highlight the importance of the work of the multidisciplinary team that carries out health care strategies, such as actions aimed at vaccination. To achieve this, it is necessary that these workers are prepared to carry out activities in their daily lives⁵.

In this way, educational workshops provide opportunities for the construction of individual and collective knowledge, exchange of knowledge, discussion on various topics that can facilitate teaching and learning, considered a space resulting from activities for the development of skills and interaction⁶.

In view of this, the need to qualify workers since graduation stands out, with a view to improving knowledge about vaccines, based on science and correct technique. This study aimed to report the experience of an educational workshop on vaccines with Nursing students from the Supervised Internship in Primary Health Care discipline.

METHODS

This is a descriptive study, of the experience report type, arising from the planning and implementation of a workshop on vaccination, aimed at undergraduate Nursing students and health professionals in Primary Health Care.

The experience was developed in June 2023, by two nurses studying for a Master's degree in Nursing from the Academic Master's Program in Nursing (*Programa de Mestrado Acadêmico em Enfermagem - PMAE*) at the Universidade Regional do Cariri (URCA), in the

Teaching Internship discipline, offered in the 3rd semester of the Master's program, in the aforementioned institution.

Master's students should be responsible for two groups of students from the 9th semester of the URCA undergraduate Nursing course, each composed of six students, thus making a total of 12 Nursing students, and develop an educational workshop.

From this, meetings were held between the Master's students to plan the educational workshop, with the aim of selecting content about vaccines that would contribute to the students' academic training. In addition, active methodologies were developed, such as clinical cases, simulation of application routes and use of images to assist in the acquisition of knowledge.

These students were developing their activities in the Supervised Internship discipline in the Primary Health Care Network. The invitation was made to them, as well as to professionals from the two Basic Health Units (*Unidade Básica de Saúde* - UBS) where the students were located. The workshop was held at one of the UBS located in the city of Crato, Ceará, Brazil.

This educational workshop was carried out in accordance to the steps of Arco de Maguerez, a teaching methodology adapted to the Brazilian reality⁷. Within the perspective of action-reflection-action, the need for learning, reflection on the problem encountered and the proposal of actions to resolve the problem was obtained.

In observing reality, conversation circles were held to identify the need for learning, which, with the use of active methodologies, provided greater interaction and discussions between members. At this time, some deficiencies were listed on different topics, with three possible themes being identified: vaccines; nursing consultation for people with hypertension and diabetes mellitus; and childcare consultation.

In a second meeting, the relevance of the suggested topics was discussed, with the topic of vaccines being chosen, as the majority of academics reported a deficiency in this topic. From this, the key points were listed, such as the vaccination calendar, organization of vaccines, application of vaccines and post-vaccination reactions.

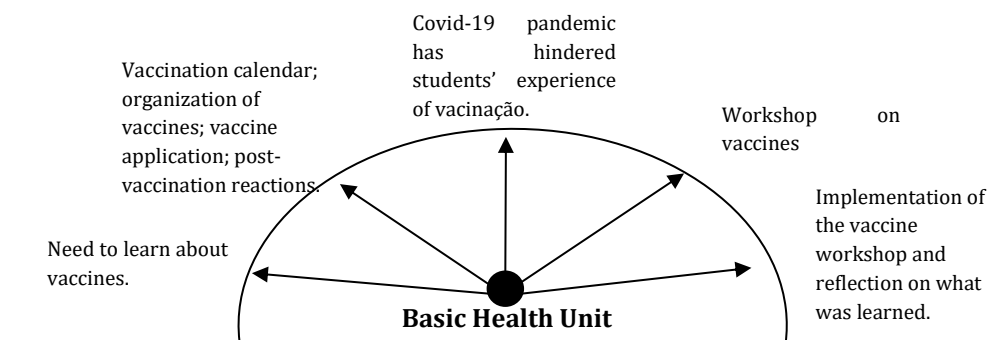
In theorization, the main issue was related to the COVID-19 pandemic, which hindered the students' teaching-learning process, especially in the practical component, causing learning deficits.

To try to solve the problem, an educational workshop on vaccines was designed. Afterwards, there was reflection on the impact that the workshop had on learning and safety in carrying out vaccination procedures, as well as the creation of a flowchart for the vaccines in

the vaccination calendar, to be displayed in the unit's vaccination room. Thus, a product was generated as a result of the learning experience.

The information according to the Arco de Maguerez⁷ is shown in Figure 1 below:

Figure 1: Representation of the educational workshop from the Arco de Maguerez⁷. Crato, Ceará, Brazil, 2023.



The educational workshop took place during the morning and afternoon. In the morning shift, general aspects about vaccination were covered, such as the definition of the term, types, when they should be administered, application sites, side effects and timing of vaccines, that is, the interval between doses. In the afternoon, the types of vaccination records (child, adolescent, elderly and pregnant women) and the correct storage of immunobiologicals were presented.

In order to understand the weaknesses and strengths regarding the topic, the Master's students created and used their own instrument, consisting of five multiple choice questions, which were applied before and after the educational workshop. The questions related to knowledge and application of vaccines.

The instrument's questions were in a Likert scale format, with five points: very satisfied, satisfied, neutral, dissatisfied and very dissatisfied. The aim was to carry out a comparison before and after the workshop to assess the participants' perception of their level of satisfaction regarding their knowledge regarding vaccines.

After completing the educational workshop, an evaluation form was handed out to the tutors, with a view to obtaining feedback on the experience. This instrument consisted of five questions: *How do you evaluate your knowledge?; How difficult is it for you to apply vaccines?; How do you evaluate your knowledge in guiding and knowing how to differentiate vaccines?; Do you feel safe performing any procedure involving vaccination on people of any age group?; Do you feel empowered and confident about everything involving vaccines?* The questions were presented on a five-point Likert scale, which were also created by the Master's students.

It should be noted that the study was not submitted to a Research Ethics Committee (*Comitê de Ética em Pesquisa - CEP*), as it is an experience report. However, all requirements

proposed by Resolution No. 510/2016 of the Brazilian National Health Council⁸, such as ethics and respect for participants, were followed.

RESULTS

Seven Nursing students and a Nursing technician who works in the vaccination room of a UBS participated in the workshop. The majority of participants (70%) were female, and ages ranged from 22 to 45 years old.

Although all health professionals, such as doctors, Nursing technicians, dentists, pharmacists and nurses from the two UBS were invited, only one Nursing technician participated in the educational workshop. Furthermore, few students participated in the workshop in the afternoon, representing a continuing education challenge to be overcome.

By using the forms before and after the educational workshop, it was possible to understand the weaknesses and strengths of the students, through the degree of satisfaction with each item of the instrument. This strategy contributed to better targeting of Master's students, as it was possible to detect gaps in knowledge regarding immunobiologicals, reinforce successes, in addition to comparing the participants' performance.

With regard to how the participants evaluated their knowledge about vaccines before the workshop, the majority evaluated it as neutral (No. = 50%), after completing the workshop, 70% said they were satisfied with their knowledge.

Regarding how they evaluate their knowledge in guiding and knowing how to differentiate vaccines, most participants were neutral (No. = 70%). At the end of the course, there was a predominance of satisfied people (No. = 80%).

Regarding the degree of difficulty in administering vaccines, 40% of members were neutral, and most reported later that they were very satisfied (No. = 60%). Regarding the question whether they feel safe performing any procedures involving vaccines on people of any age group, the majority said they were satisfied (No. = 50%). In the post-test, they mentioned being very satisfied (No. = 40%).

When asked whether they felt empowered and safe when it came to vaccines, participants were mostly neutral (No. = 60%). Afterwards, when given the same question, they said they were satisfied (No. = 60%).

Among the active methodologies used during the educational workshop, the following stand out: solving clinical cases, in which participants would schedule vaccines, according to the case presented; use of images, such as the representation of an empty refrigerator, through

which participants had to organize the shelves and immunobiologicals appropriately and realistic simulation on the correct application of vaccines.

DISCUSSION

The prevalence of females and young people was observed in the educational workshop. Nursing is still a mostly female profession, as the role of caring is assigned to them, which contributes to the entry of this gender into the nursing course⁹.

Permanent Health Education (*Educação Permanente em Saúde* - EPS) is permeated by challenges for its implementation, related to work overload, lack of planning, devaluation of EPS by managers or mischaracterization of its guidelines, worker turnover in units and low adherence¹⁰.

The choice of content taught in the educational workshop was obtained from dialogue with Nursing undergraduates, and is characterized as essential for carrying out safe vaccination practices, since the academic needs to have theoretical knowledge to, consequently, be successful in the application of immunobiologicals.

In a study carried out with Medicine and Nursing students at a public institution in the state of Maranhão, Brazil, it was noticed that these students have little knowledge about vaccination, as this topic was not included in the courses' syllabus, which directly affects the academic future¹¹. Therefore, it is necessary to identify the difficulties faced by students in undergraduate health courses so that they can be resolved effectively.

Currently, Nursing courses encourage the completion of evaluation forms, such as self-evaluation, professor evaluation by the students and formative evaluation. These instruments allow the identification of weaknesses and monitoring of participants' performance throughout the entire training process, not just at the end¹².

The vaccination room is the responsibility of nurses, with the professional nurse being technically responsible for it. Therefore, it is necessary for nurses to have scientific and practical knowledge, based on evidence, as they are the professionals responsible for managing the health service they work in¹³.

From the initial semesters of the Nursing degree, students are encouraged to carry out technical procedures, one of which is the application of vaccines. Skills training allows the implementation of techniques, based on scientific knowledge, in addition to the acquisition of self-confidence¹⁴.

Nursing students must be able to address issues about immunization appropriately, through truthful information, and answer possible doubts that the population may have

regarding vaccination, thus minimizing the spread of fake news, which leaves room for anti-vaccine movements¹¹.

It was noticed that there was an improvement in the knowledge and performance of the participants after the educational workshop. It can be said that the use of active methodologies contributed to these results, as they are methods that encourage autonomy, problem solving, interaction and knowledge acquisition¹⁵.

During the realistic simulation, a household cleaning sponge, syringes and needles were used to represent the application angles. The superficial part of the sponge represented the subcutaneous and intradermal tissue. The intramuscular tissue was demonstrated in the deep part of the sponge. Participants were encouraged to practice and received support from tutors, as well as having the opportunity to ask questions throughout the educational workshop.

The importance of working on health issues in terms of promoting knowledge and safety in professional practice is well-known, with training aimed at promoting the acquisition of knowledge on a given subject/problem, as health situations vary depending on time, culture, locality and new scientific discoveries¹⁶.

The training of health professionals, as well as Nursing students who are included in health services during the supervised internship, influences clinical practice, in which they incorporate the recommendations learned into their daily professional lives, which reflects on better care provided to the patient¹⁶.

Carrying out the educational workshop brought benefits to both participants and tutors, as it allowed them to understand the difficulties faced by Nursing students and health professionals and from this, the tutors were able to intervene and contribute to the training process and professional qualification.

Activities like these enable the development of skills as Master's degree professionals and future professors, which, associated with an important topic such as vaccines, allow training that is consistent with the propositions in the PMAE teaching internship discipline, which is to prepare Master's students for teaching, dialogue and search for partnerships to better develop activities, as well as directing future nurses to evidence-based practice.

CONCLUSION

Holding workshops is relevant in the training process of Nursing students and health professionals, as it contributes to the improvement of knowledge that is involved in their training process. Despite being a subject discussed in academic and professional circles, it is necessary to always be up to date on the topic, as it is a subject with constant changes.

Furthermore, the workshop allowed the exchange of experiences between participants and tutors, as well as arousing involvement and interest, seeking to fill gaps and instigate critical/reflective thinking among members. Based on this, initiatives like this should be carried out in other municipalities with the aim of training future professionals as well as current professionals in order to enhance knowledge and care.

The limitations of the study were the participation of only one health professional, as the invitation was made to all UBS professionals, in addition to the lack of feedback from some members who participated in the course in just one shift, not providing the opportunity to fill the post-test form.

REFERENCES

1. Neves RG, Saes MO, Machado KP, Duro SMS, Facchini LA. Tendência da disponibilidade de vacinas no Brasil: PMAQ-AB 2012, 2014 e 2018. *Cad Saúde Pública* [Internet]. 2022 [cited in 29 Sep 2023]; 38(4):PT135621. Available from: <https://www.scielo.br/j/csp/a/DCdVyqX6jrwqvGwkGnJMqXw/?format=pdf&lang=pt>
2. Frugoli AG, Prado RS, Silva TMR, Matozinhos FP, Trapé CA, Lachtim SAF. *Fake news* sobre vacinas: uma análise sob o modelo dos 3Cs da Organização Mundial da Saúde. *Rev Esc Enferm USP*. [Internet]. 2021 [cited in 30 Sep 2023]; 55:e03736. Available from: <https://www.scielo.br/j/reeusp/a/G6LTwYzSPqcGS6D7xw47bpL/?format=pdf&lang=pt>
3. Peres KC, Buendgens FB, Prates EA, Bonetti NR, Soares L, Peláez CMV, et al. Vacinas no Brasil: análise histórica do registro sanitário e a disponibilização no sistema de saúde. *Ciênc Saúde Colet*. [Internet]. 2021 [cited in 29 Sep 2023]; 26(11):5509-22. Available from: <https://www.scielo.br/j/csc/a/yxjQ46Jm4cnKKjkxyqRz7c/?format=pdf&lang=pt>
4. Neves RG, Duro SMS, Muñiz J, Castro TRP, Facchini LA, Tomasi E. Estrutura das unidades básicas de saúde para atenção às pessoas com diabetes: ciclos I e II do Programa Nacional de Melhoria do Acesso e da Qualidade. *Cad Saúde Pública* [Internet]. 2018 [cited in 29 Sep 2023]; 34(4):e00072317. Available from: <https://www.scielo.br/j/csp/a/qLrXpkBm9ZyrwBhBzm8T7Kr/?format=pdf&lang=pt>
5. Bacurau AGM, Francisco PMSB. Doenças crônicas em idosos e vacinação contra a influenza: orientação dos profissionais de saúde e o papel da mídia. *Rev Bras Med Fam Comunidade* [Internet]. 2022 [cited in 29 Sep 2023]; 17(44):2819. Available from: <https://rbmfc.org.br/rbmfc/article/view/2819/1720>
6. Aguiar MM, Silva APM. Oficinas educativas como metodologia no processo ensino-aprendizagem: construção e práticas. *Pesqui Debate Educ*. [Internet]. 2021 [cited in 30 Sep 2023]; 11(2):1-13, e31842. Available from: <https://periodicos.ufjf.br/index.php/RPDE/article/view/31842/23372>
7. Bordenave JD, Pereira AM. *Estratégias de ensino-aprendizagem*. 16. ed. Petrópolis: Vozes; 2014. 312 p.
8. Conselho Nacional de Saúde (Brasil). Resolução N° 510, de 7 de abril de 2016. Esta Resolução dispõe sobre as normas aplicáveis a pesquisas em Ciências Humanas e Sociais cujos procedimentos metodológicos envolvam a utilização de dados diretamente obtidos com os participantes ou de informações identificáveis ou que possam acarretar riscos maiores do que os existentes na vida cotidiana, na forma definida nesta Resolução [Internet]. Brasília, DF: CNS; 2016 [cited in 30 June 2023]. Available from: https://bvsms.saude.gov.br/bvs/saudelegis/cns/2016/res0510_07_04_2016.html.

9. Oliveira RCE, Tinôco JDS, Delgado MF, Andriola IC, Silva CMB, Lira ALBC. Estratégia educativa no ensino de anatomia humana aplicada à enfermagem. Av Enferm. [Internet]. 2018 [cited in 30 June 2023]; 36(1):31-9. Available from: <http://www.scielo.org.co/pdf/aven/v36n1/0121-4500-aven-36-01-00031.pdf>
10. Silva RRD, Santos TS, Ramos WT, Barreiro MSC, Mendes RB, Freitas CKAC. Desafios da educação permanente na atenção primária à saúde: uma revisão integrativa. Saúde Colet. [Internet]. 2021 [cited in 30 June 2023]; 11(65):6324-28. Available from: <https://revistasaudecoletiva.com.br/index.php/saudecoletiva/article/view/1615/1875>
11. Silva MP, Araújo CNS, Durans KCN, Carvalho CB, Vale FMS, Pasklan ANP. Conhecimento dos acadêmicos dos cursos da saúde acerca de vacinação. Rev Enferm Atenção Saúde [Internet]. 2023 [cited in 30 June 2023]; 12(1):e202370. Available from: <https://seer.uftm.edu.br/revistaelectronica/index.php/enfer/article/view/6539/6683>
12. Fonseca LMM, Aredes NDA, Fernandes AM, Batalha LMC, Apóstolo JMA, Martins JCA, et al. Simulação por computador e em laboratório no ensino em enfermagem neonatal: as inovações e o impacto na aprendizagem. Rev Latinoam Enferm. [Internet]. 2016 [cited in 30 June 2023]; 24:e2808. Available from: <https://www.scielo.br/j/rlae/a/qj9qKGwg38RDgG9Wqmfhqrg/?format=pdf&lang=pt>
13. Martins VHS, Silva AC, Lacerda BS, Penaforte ACC, Carvalho MAB, Albuquerque LAO, et al. Enfermeiro gerente e sua relação com a gestão do cuidado na unidade básica de saúde. Rev Enferm Atenção Saúde [Internet]. 2023 [cited in 30 June 2023]; 12(1):e202357. Available from: <https://seer.uftm.edu.br/revistaelectronica/index.php/enfer/article/view/5631/6609>
14. Canever BP, Costa DG, Magalhães ALP, Gonçalves N, Bellaguarda MLR, Prado ML. Treinamento de habilidades por simulação no desenvolvimento de competências de estudantes de Enfermagem. REME Rev Min Enferm. [Internet]. 2022 [cited in 30 June 2023]; 26:e-1457. Available from: <https://periodicos.ufmg.br/index.php/reme/article/view/38545/31950>
15. Santos RSS, Gadelha SP, Bandeira ICJ. Concepção de discentes sobre a aplicação de metodologias dinâmicas na monitoria de genética e biologia molecular. Encontro de Extensão, Docência e Iniciação Científica (EEDIC) [Internet]. 2019 [cited in 29 Sep 2023]; 6(1):1-6. Available from: <http://ead.unicatolicaquixada.edu.br/wp-content/uploads/sites/33/2019/10/Resultado-Trabalhos-Aprovados-XV-EEDIC-31.10.2019.pdf>
16. Almeida JRS, Bizerril DO, Saldanha KGH, Almeida MEL. Educação Permanente em Saúde: uma estratégia para refletir sobre o processo de trabalho. Rev ABENO [Internet]. 2016 [cited in 30 June 2023]; 16(2):7-15. Available from: <https://revabeno.emnuvens.com.br/revabeno/article/view/248/209>

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