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Health education and vaccine hesitancy: challenges for nursing in promoting immunization

Educação em saúde e hesitação vacinal: desafios da Enfermagem na promoção da imunização

Educación para la salud y vacilación vacunal: desafíos de la Enfermería en la promoción de la inmunización

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Abstract: Vaccine hesitancy represents a complex public health challenge whose consequences extend beyond individual vaccination decisions and may compromise collective protection. Beyond concerns about vaccine safety and efficacy, this phenomenon involves misinformation, social inequalities, weakened institutional trust, and difficulties accessing healthcare services. In this context, health education and nursing practice play a strategic role in promoting vaccination. This study aimed to summarize the factors associated with vaccine hesitancy and the health education and nursing strategies described in the literature to promote vaccination. This is a narrative literature review with a qualitative approach, conducted through the Regional Portal of the Virtual Health Library (VHL), using the LILACS and BDENF databases and covering publications from 2020 to 2026. The final sample consisted of 37 publications. The findings revealed that vaccine hesitancy is influenced by individual, social, cultural, and institutional determinants, highlighting the need to distinguish it from barriers to accessing immunization services. The strategies identified included dialogue, addressing concerns, communicating reliable information, active outreach, and monitoring vaccination status. Nursing was found to play an important role in addressing misinformation, guiding the population, and strengthening trust in vaccines. It is concluded that promoting vaccination requires more than making vaccines available: it demands attentive listening, health education, professional commitment, and accessible services capable of recognizing population needs and strengthening collective protection.

Keywords: Vaccine hesitancy; Health education; Nursing; Vaccination; Immunization.

Resumo: A hesitação vacinal representa um desafio complexo para a saúde pública, cujas consequências ultrapassam a decisão individual de vacinar-se e podem comprometer a proteção coletiva. Mais do que dúvidas sobre a segurança e a eficácia dos imunizantes, esse fenômeno envolve desinformação, desigualdades sociais, fragilidade da confiança nas instituições e dificuldades de acesso aos serviços de saúde. Diante desse cenário, a educação em saúde e a atuação da Enfermagem assumem papel estratégico na promoção da vacinação. Este estudo teve como objetivo sintetizar os fatores associados à hesitação vacinal e as estratégias de educação em saúde e de atuação da Enfermagem descritas na literatura para a promoção da vacinação. Trata-se de uma revisão narrativa da literatura, de abordagem qualitativa, realizada no Portal Regional da Biblioteca Virtual em Saúde (BVS), nas bases LILACS e BDENF, contemplando publicações de 2020 a 2026. A amostra foi composta por 37 publicações. Os achados evidenciaram que a hesitação vacinal é influenciada por determinantes individuais,

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sociais, culturais e institucionais, exigindo sua diferenciação das barreiras de acesso à imunização. Entre as estratégias identificadas, destacaram-se o diálogo, o acolhimento das dúvidas, a comunicação baseada em informações confiáveis, a busca ativa e o acompanhamento da situação vacinal. Evidenciou-se a relevância da Enfermagem no enfrentamento da desinformação, na orientação da população e no fortalecimento da confiança nos imunizantes. Conclui-se que promover a vacinação exige mais do que disponibilizar vacinas: requer escuta qualificada, educação em saúde, compromisso profissional e serviços acessíveis, capazes de reconhecer as necessidades da população e fortalecer a proteção coletiva.

Palavras-chave: Hesitação vacinal; Educação em saúde; Enfermagem; Vacinação; Imunização.

Resumen: La vacilación vacunal representa un desafío complejo para la salud pública, cuyas consecuencias trascienden la decisión individual de vacunarse y pueden comprometer la protección colectiva. Más que dudas sobre la seguridad y la eficacia de las vacunas, este fenómeno implica desinformación, desigualdades sociales, fragilidad de la confianza en las instituciones y dificultades de acceso a los servicios de salud. Ante este escenario, la educación para la salud y la actuación de Enfermería desempeñan un papel estratégico en la promoción de la vacunación. Este estudio tuvo como objetivo sintetizar los factores asociados a la vacilación vacunal y las estrategias de educación para la salud y de actuación de Enfermería descritas en la literatura para promover la vacunación. Se trata de una revisión narrativa de la literatura, con enfoque cualitativo, realizada en el Portal Regional de la Biblioteca Virtual en Salud (BVS), en las bases LILACS y BDENF, que incluyó publicaciones de 2020 a 2026. La muestra estuvo compuesta por 37 publicaciones. Los hallazgos evidenciaron que la vacilación vacunal está influida por determinantes individuales, sociales, culturales e institucionales, por lo que es necesario diferenciarla de las barreras de acceso a la inmunización. Entre las estrategias identificadas destacaron el diálogo, la atención a las dudas, la comunicación basada en información fiable, la búsqueda activa y el seguimiento del estado de vacunación. Se evidenció la relevancia de Enfermería para combatir la desinformación, orientar a la población y fortalecer la confianza en las vacunas. Se concluye que promover la vacunación exige más que ofrecer vacunas: requiere escucha cualificada, educación para la salud, compromiso profesional y servicios accesibles, capaces de reconocer las necesidades de la población y fortalecer la protección colectiva.

Palabras clave: Vacilación vacunal; educación para la salud; Enfermería; vacunación; inmunización.

1 Introduction

Vaccination constitutes one of the main strategies for preventing and controlling vaccine-preventable diseases, contributing to the reduction of morbidity and mortality and to individual and collective protection. In Brazil, the National Immunization Program (PNI), developed within the scope of the Unified Health System (SUS), coordinates vaccination strategies and establishes vaccination calendars throughout the national territory. However, despite the free offer of immunization agents, challenges related to population adherence

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persist, involving doubts about the safety and effectiveness of vaccines, the dissemination of false information, individual beliefs and difficulties in accessing health services (Brasil, [s. d.]a; Brasil, [s. d.]b; World Health Organization, 2019).

In this context, vaccine hesitancy represents an important challenge for public health, characterized by delay or refusal to accept recommended vaccines, even when vaccination services are available. It is a complex and multifactorial phenomenon, influenced by individual, social, cultural aspects and those related to trust in vaccines and health institutions. To understand this phenomenon, the Ministry of Health presents the 5 Cs model of vaccine hesitancy: complacency, convenience, trust, context and communication, which cover the perception of risk of vaccine-preventable diseases, conditions of access to services, confidence in the safety and effectiveness of vaccines, sociocultural aspects and the influence of information on the construction of knowledge and attitudes (Brasil, [s. d.]a).

However, it is essential to distinguish vaccine hesitancy from delay resulting from difficulties in accessing health services, since not all delayed vaccinations represent resistance to immunization. While some individuals may postpone vaccination due to fear of adverse events, doubts about the effectiveness of the vaccines or lack of confidence in health recommendations, others may face obstacles related to the incompatibility between the opening hours of health units and the working day, distance or transport difficulties. Although these situations require different intervention strategies, they can occur simultaneously in the same individual. Thus, while doubts require acceptance, qualified listening and clarification, access barriers require attention to the organization and provision of (Roberti et al., 2024) vaccination services. Furthermore, the dissemination of false information, especially on social networks and messaging applications, can intensify the population's distrust and compromise adherence to vaccination recommendations, as evidenced by Galhardi et al.

(2022) when analyzing the circulation of fake news related to vaccination against COVID-19.

Faced with this problem, health education constitutes an important strategy for combating vaccine hesitancy, as it favors the sharing of reliable information, the clarification of doubts and the strengthening of individuals' autonomy in decisions related to vaccination. To this end, educational actions must consider the sociocultural characteristics of the population, use accessible language and promote dialogue and qualified listening, contributing to the establishment of trusting relationships between users and health professionals (Desjardins et al., 2023).

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In this scenario, Nursing plays a strategic role, especially in Primary Health Care, by acting directly in immunization activities, monitoring vaccination schedules, actively searching for individuals with delayed vaccinations and developing educational actions within the community. Its actions allow it to identify doubts, understand the difficulties faced by the population and guide users according to their needs, in addition to contributing to the recognition and tackling of barriers to accessing (Ferreira; Silva, 2026) vaccination services.

Carrying out this qualitative narrative review is justified by the need to gather and analyze scientific evidence on vaccine hesitancy, health education strategies and Nursing's role in promoting vaccination. This analysis makes it possible to identify practices aimed at addressing doubts, fears and misinformation related to immunizations, as well as interventions aimed at overcoming barriers to accessing immunization services. Furthermore, it seeks to understand the results and limitations of these strategies, helping to support Nursing action that is more based on scientific evidence and suited to the different needs of the population.

Given the above, the following research question is established: What health education and nursing practice strategies are described in the literature on vaccine hesitancy and vaccination promotion, and what results and limitations were reported? The general objective of this study is to summarize the factors associated with vaccine hesitancy and the health education and nursing practice strategies described in the literature to promote vaccination.

2 Methodology

2.1 Type of study

This is a narrative review of the literature, with a qualitative approach, developed with the purpose of gathering, analyzing and discussing scientific knowledge about the factors associated with vaccine hesitancy and the health education and nursing practice strategies described in the literature to promote vaccination.

The narrative review was adopted because it allows a broad approach to a topic, bringing together publications with different methodological characteristics and allowing the interpretative discussion of available knowledge. In this way, original research, literature reviews, experience reports, theoretical and reflective studies, dissertations and theses were

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considered, in order to contemplate different perspectives on vaccine hesitancy, health education and nursing practice.

The review was guided by the following guiding question: what health education and nursing practice strategies are described in the literature on vaccine hesitancy and vaccination promotion, and what results and limitations were reported?

2.2 Source of information and search strategy

The bibliographic search was carried out on November 5, 2026, on the Regional Portal of the Virtual Health Library (BVS), in the Latin American and Caribbean Literature in Health Sciences (LILACS) and Nursing Database (BDENF) databases, using the field “Title, abstract or subject”. The strategies were developed based on the Health Sciences Descriptors (DeCS) vocabulary, considering terms in Portuguese, English and Spanish.

Three thematic blocks were defined: vaccine hesitancy; health education and communication; and Nursing and Nursing care. From them, two complementary search strategies were developed, combining the first block with the second and, subsequently, the third. The Boolean operator OR was used to group the terms of each block and AND to relate the thematic blocks. Search 1 – Vaccine hesitancy AND health education/health communication: ("Vaccination Hesitation" OR "Vaccination Hesitancy" OR "Vaculation Hesitancy" OR "Vaccination Delay" OR "Vaccination Hesitation" OR "Vaccination Delay") AND ("Health Education" OR "Health Education" OR "Health Education" OR "Health Communication" OR "Health Communication" OR "Comunicación en Salud") Search 2 – Vaccine hesitancy AND Nursing: ("Vaccination Hesitation" OR "Vaccination Hesitancy" OR "Vaccination Hesitancy" OR "Vaccination Delay" OR "Vaccination Hesitation" OR "Vaccinations in Delay") AND ("Nursing" OR "Nursing" OR "Nursing" OR "Nursing Care" OR "Nursing Care" OR "Nursing Care")

In both searches, filters were applied to publications from 2020 to 2026, in Portuguese, English and Spanish. The time frame was defined to include recent scientific production on vaccine hesitancy, including studies from the period of the COVID-19 pandemic and subsequent years, without restricting the investigation to this disease.

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2.3 Inclusion and exclusion criteria

Publications in Portuguese, English or Spanish were included, between 2020 and 2026, that addressed at least one of the following aspects: factors associated with vaccine hesitancy, health education and communication strategies related to vaccination or Nursing's role in promoting immunization. Different vaccines and population groups were considered, as long as the studies were related to the guiding question and the objective of the review.

Original studies, literature reviews, experience reports, theoretical and reflective studies, dissertations and theses were accepted. Publications unrelated to the topic, duplicate records and materials whose full text could not be retrieved were excluded.

2.4 Search and selection process for publications

The two search strategies initially retrieved 530 records, 392 in Search 1 and 138 in Search 2. After applying the filters, 64 records remained: 41 in the first search and 23 in the second.

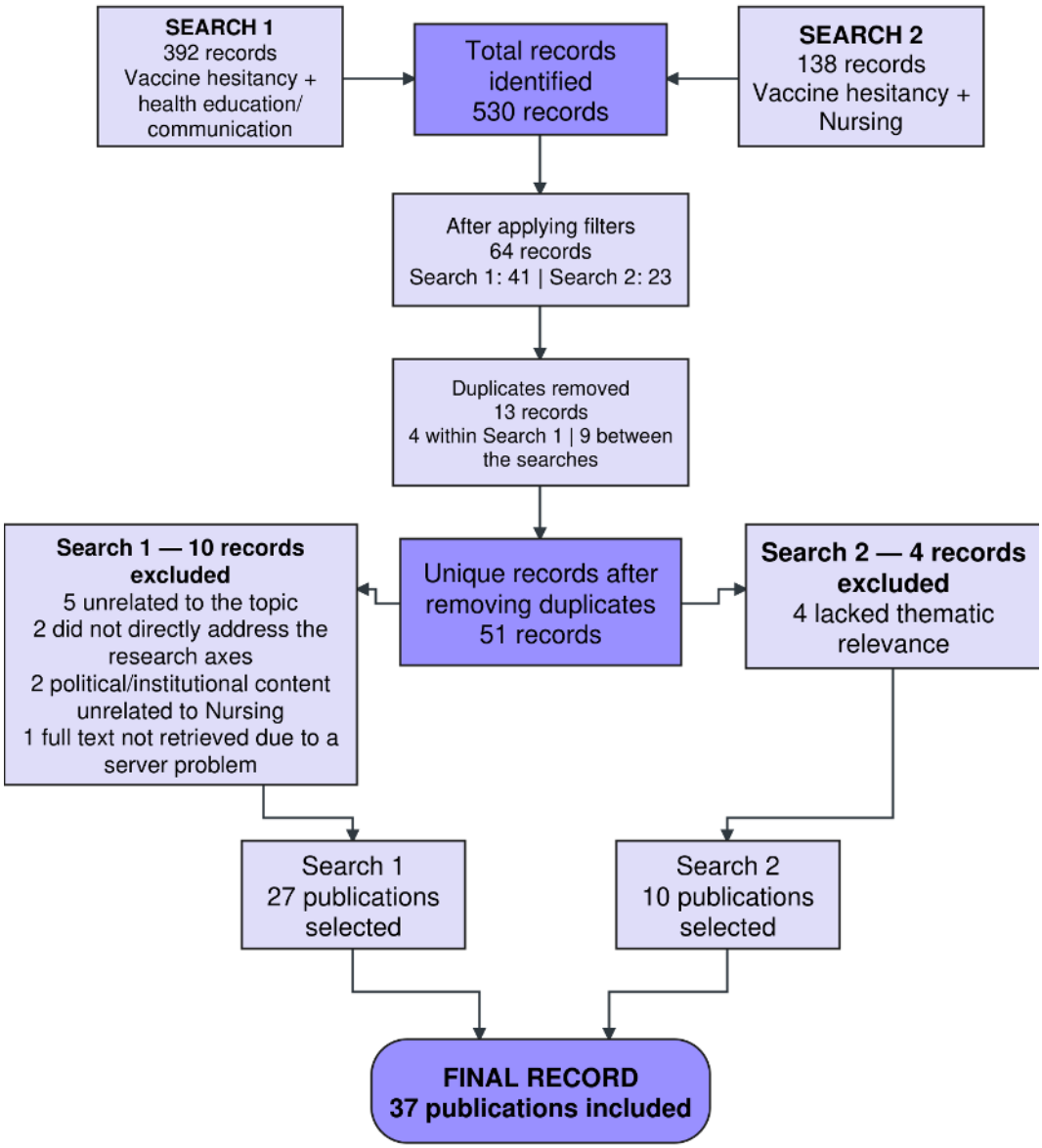
In Search 1, four internal duplicates were removed and ten records were excluded: five unrelated to the theme, two without a direct approach to the central axes, two on political and institutional content unrelated to Nursing activities and one whose full text could not be retrieved due to problems on the repository server. In the end, 27 publications were selected.

In Search 2, nine duplicate records in relation to the first search were removed. Of the remaining 14 records, four were excluded due to lack of thematic relevance, resulting in ten publications selected. Thus, the final sample consisted of 37 publications, 27 from Search 1 and ten from Search 2.

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Figure 1 – Flowchart of the publication search and selection process



Source: Prepared by the authors (2026).

The selection was carried out individually, considering the relevance of the publications in relation to the guiding question and the objective of the research. Duplicate records were identified and counted once, avoiding their repeated inclusion in the sample.

2.5 Data extraction and organization

The selected publications were examined individually, collecting information regarding bibliographic identification, type of publication, objectives, methodological procedures,

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population or object of investigation, main results and limitations reported by the authors. The contributions of each publication to the three central axes of research were also observed: vaccine hesitancy; health education and communication; and nursing practice.

When extracting the data, the characteristics of each type of publication were considered, distinguishing original studies, reviews, experience reports, dissertations, theses and theoretical or reflective works. When different publications originating from the same research were identified, this relationship was considered during the synthesis, in order to avoid duplication of participants and findings.

2.6 Analysis and synthesis of results

The analysis was guided by the general objective of the research, seeking to identify the factors associated with vaccine hesitancy and differentiate them from access barriers; describe health education strategies and nursing practices aimed at promoting vaccination; and characterize the results and limitations of the included publications. The synthesis was developed in a descriptive and interpretative way, considering the similarities, differences and contributions of the studies.

During the interpretation, the particularities of the designs and publication modalities were respected, avoiding attributing causality or effectiveness relationships to strategies whose effects were not directly evaluated. Limitations were considered as reported by the authors, distinguishing them from critical observations made during the analysis.

References external to the sample were also used occasionally to contextualize and complement the discussion, without being part of the final selection or being counted among the 37 publications analyzed.

3 Development

3.1 Characterization of selected publications

37 publications were considered in the narrative review. To facilitate the presentation of the studies, a synthetic table was created containing identification number, author and year, type of publication and summary of the main findings. Subsequently, the results were grouped into three thematic axes for discussion.

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Table 1 – Summary of publications included in the narrative review

Nº	Author/year	Publication type	Summary of main findings
1	Costa et al. (2020)	Educational intervention	Educational actions with family members contributed to improving children's vaccination completeness.
2	Gomes et al. (2025)	Experience report	Active search, educational activities and community communication were used to expand childhood vaccination coverage.
3	Matta, Paiva and Rosário (2024)	Reflective article	Social, racial and territorial inequalities influence confidence and decisions related to vaccination.
4	Camargo et al. (2024)	Quantitative	Conspiratorial beliefs and trust in institutions are associated with vaccination intention.
5	Minchoni and Schucman (2024)	Discussion article	Race, class and territory interfere with perceptions about the need for vaccination.
6	Massarani et al. (2021)	Content analysis	Narratives about vaccination on social media reveal the importance of scientific communication and combating misinformation.
7	Santos Júnior and Costa (2022)	Instrument adaptation and validation	The PACV-Brasil instrument allows identifying attitudes and behaviors related to vaccine hesitancy.
8	Oliveira et al. (2024)	Qualitative	Misinformation and less than inclusive communication make it difficult for homeless people to trust and vaccinate themselves.
9	Ferro et al. (2023)	Bioethical reflection article	Vaccine refusal involves issues of autonomy, institutional trust and collective responsibility.
10	Silva et al. (2023)	Integrative review	Misinformation, sociocultural factors and distrust in authorities appear associated with vaccine hesitancy.
11	Morgado and Souza (2022)	Quantitative transversal	Vaccine hesitancy among those responsible for children and concerns about adverse effects and safety were identified.
12	Nascimento et al. (2024)	Systematic review	Chatbots have the potential to offer information and clarify doubts related to vaccination.
13	Viana et al. (2023a)	Qualitative	Fear of exposure to COVID-19 and difficulties in accessing services contributed to delays in childhood vaccination.
14	Dal Moro et al. (2026)	Integrative review	Evidence-based education, transparent communication and technologies are highlighted as strategies to address hesitancy.
15	Rocha et al. (2026)	Integrative review article.	Investigates interventions to reduce vaccine hesitancy related to childhood and adolescent vaccines.
16	Fragoso and Silva (2025)	Review	Low vaccination coverage is related to socioeconomic factors, doubts from those responsible and access barriers.

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Nº	Author/year	Publication type	Summary of main findings
17	Oliveira et al. (2026)	Theoretical essay	Discusses vaccine hesitancy and the challenges for vaccination against COVID-19 in Primary Health Care.
18	Sato et al. (2023)	Ecological study	Identifies reduction in measles vaccination coverage and territorial inequalities related to access to services.
19	Oliveira, Pinheiro and Ortega (2025)	Integrative review	The disinfodemic undermines trust in institutions and reinforces the need for public communication and digital literacy.
20	Nogueira et al. (2025)	Critical discourse analysis	Anti-vaccination speeches on social media mobilize distrust in science and conspiracy theories.
21	Santos Júnior et al. (2022)	Theoretical essay	Discusses factors associated with hesitancy and health communication and education strategies to strengthen confidence in vaccines.
22	Oliveira, Bezerra and Oliveira (2024)	Theoretical essay	Analyzes the distrust and controversies related to vaccination against COVID-19.
23	Cuchi et al. (2025)	Quantitative observational study	It highlights the influence of information sources on maternal perceptions about vaccination and trust in health services.
24	Leal (2024)	Discussion article	Analyzes vaccine refusal considering inequalities of race, class, gender and territory.
25	Scherer et al. (2022)	Cross-sectional study	Identifies factors associated with hesitancy and intention to vaccinate against COVID-19 in Southern Brazil.
26	Ventura (2024)	Reflective article	Discusses anti-vaccine propaganda, extremist movements and their impacts on public health.
27	Correia (2026)	Qualitative study	Highlights the importance of professional guidance and nursing action in decisions about vaccination during pregnancy.
28	Gentil (2022)	Reflection article	Addresses vaccine refusal from an ethical perspective, highlighting solidarity, collective responsibility and social justice.
29	Laurenti et al. (2023)	Qualitative	Explores older people's perceptions about vaccination against COVID-19, including doubts and hesitancy.
30	Viana et al. (2023b)	Integrative review	It highlights lack of knowledge, doubts and indecision among family members as aspects related to childhood vaccine hesitancy.
31	Maciel et al. (2024)	Experience report	Presents advanced practice nursing actions, active outreach and education to address vaccine delays.
32	Borges et al. (2024)	Qualitative	Nursing professionals relate fake news to hesitation and highlight health education and professional training.
33	Silva et al. (2025)	Qualitative	Highlights nursing challenges in the face of fake news and highlights active outreach, ongoing education and guidance for users.

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Nº	Author/year	Publication type	Summary of main findings
34	Cabral et al. (2025)	Methodological study	Develops and validates an instrument to identify factors related to vaccine hesitancy against COVID-19.
35	De-Melo-Filho, Da-Conceição-Oliveira and Braga-Vilhena-Julho (2025)	Quantitative transversal	Investigates the vaccination status and hesitancy in Nursing students.
36	Brito et al. (2025)	Exploratory descriptive study	Analyzes anti-vaccination posts on Facebook, identifying content related to distrust and adverse effects.
37	Vieira et al. (2025)	Methodological research	Develops mobile application to support vaccination room professionals in decision-making in the face of vaccination delays.

Source: Prepared by the authors (2026).

3.2 Vaccine hesitancy and its different determinants

Vaccine hesitancy involves different factors that influence the decision to receive or not an immunizer. Among the most frequent in the literature are the fear of adverse events and doubts about safety and efficacy. Morgado and Souza (2022), Viana et al. (2023a) and Laurenti et al. (2023) identified these concerns among family members of children and elderly people. Studies also show that the existence of doubts does not necessarily mean refusal, as some people maintain a favorable perception of vaccines, even when they show insecurity.

The decision to vaccinate is also related to the perception of disease risks, trust in institutions and available information. Scherer et al. (2022) and Camargo et al.

(2024) identified associations between hesitancy, risk perception and beliefs related to vaccination. In this scenario, studies included in the review, such as Massarani et al. (2021), Brito et al. (2025) and Nogueira et al. (2025), analyzed content contrary to vaccination and the circulation of false information, especially on social media. Complementarily, Frugoli et al. (2021), used as an external reference, also contributes to contextualizing the spread of fake news related to vaccines.

However, hesitation cannot be understood solely by individual beliefs and choices. Matta et al. (2024), Leal (2024), Minchoni and Schucman (2024) and Ventura (2024) expand this discussion by addressing the influence of social inequalities, racial relations, privileges and political discourses on vaccination decisions. These contributions show that attitudes towards vaccines are constructed in different social contexts and that coping strategies need to consider these differences.

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It is also necessary to distinguish hesitation from access difficulties. Viana et al. (2023b) identified situations in which fear of contamination during travel and the unavailability of vaccines made vaccination difficult. Sato et al. (2023), when analyzing measles coverage, found differences between Brazilian regions. In a complementary perspective, Matta et al. (2024) discuss how social inequalities and operating conditions of services interfere with access. Therefore, the absence of vaccination should not be automatically interpreted as hesitation, as it may result from obstacles that prevent or make it difficult to receive the vaccine.

3.3 Health education and tackling misinformation

Given the different factors involved in hesitation, health education needs to go beyond the transmission of information. Gentil (2022) advocates that refusal or doubt be understood as opportunities to identify people's concerns and establish dialogue. This perspective also appears in Cuchi et al. (2025), which highlight the importance of health professionals in clarifying doubts and providing guidance to families.

Communication deserves special attention given the circulation of false information. Studies included in the review, such as Massarani et al. (2021), Brito et al. (2025) and Nogueira et al. (2025), show different ways of producing and sharing content that questions vaccination. In addition, Frugoli et al. (2021), as an external reference to the sample, contributes to contextualizing this problem. Oliveira, Pinheiro and Ortega (2025) add that tackling disinformation requires transparent communication, listening and public participation.

Educational strategies also include technological resources and face-to-face interventions. Nascimento et al. (2024) identified favorable results in studies that used chatbots to address hesitancy, while Rocha et al. (2026) brought together interventions aimed at vaccinating children and adolescents, with emphasis on strategies based on dialogue. Costa et al. (2020), in turn, observed an increase in vaccination completion after an educational intervention with families. Although these results point to possibilities for action, the outcomes are different: improving coverage or knowledge does not necessarily mean proving a reduction in hesitation.

3.4 Nursing role in promoting vaccination

Nursing occupies an important position in promoting vaccination through its participation in guidance, monitoring and organization of services. Silva et al. (2025) identified,

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in the reports of nursing professionals, practices of clarifying doubts, confronting false information and actively searching for people with pending vaccination. Cuchi et al. (2025) also demonstrated the recognition of nurses as reliable sources of information by families.

In addition to individual guidance, professional activity involves actions in the territory and the expansion of vaccination opportunities. Gomes et al. (2025), a publication included in the review, described practices such as active outreach, visits, communication with families and vaccination in different spaces. As a complementary contribution, Hahn et al. (2024), used as an external reference, analyzed worker immunization strategies, identifying counseling actions, educational campaigns and facilitating access. These contributions reinforce that the promotion of vaccination depends both on dialogue with the population and on the organization of services to reduce lost opportunities.

Another contribution of the literature is the development of resources to support professional practice. Santos Júnior and Costa (2022) and Cabral et al. (2025) present instruments designed to identify aspects related to vaccine hesitancy. Vieira et al. (2025), in turn, developed an application prototype to assist professionals in the face of vaccination delays. While these tools can support assessment and decision-making, they have not been demonstrated as interventions that can directly reduce hesitancy. Its contribution is mainly in supporting work planning and qualification.

The effectiveness of these practices also depends on the conditions offered to professionals. Silva et al. (2025) reported difficulties related to overload, lack of time and the need for training. These aspects indicate that it is not enough to give Nursing the responsibility of guiding the population: it is necessary to guarantee working conditions and continuing education so that dialogue and monitoring can occur appropriately.

3.5 Results and limitations of the identified strategies

The publications present different results, which need to be interpreted according to the objectives and methods of each study. Costa et al. (2020) observed an increase in vaccination completion after an educational intervention, while Gomes et al. (2025) reported 100% coverage among children up to two years old registered in the studied unit. These results demonstrate advances in the vaccination status of the groups monitored, but do not allow us to state that hesitancy has been reduced.

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Nascimento et al. (2024) and Rocha et al. (2026) brought together studies that assessed aspects such as knowledge, confidence, attitudes and vaccination intention. Although these outcomes can contribute to understanding the effects of educational strategies, they do not necessarily represent changes in vaccination behavior. This difference is important to prevent positive results in one dimension from being interpreted as proof of effectiveness in all others.

Regarding the limitations of scientific production, there is a significant presence of cross-sectional studies, research carried out in local contexts and publications focused on vaccination against COVID-19. There are also reviews and theoretical studies that expand the understanding of the determinants of hesitation, but do not evaluate specific interventions. Therefore, the findings need to be considered according to the scope of each methodological design.

Taken together, the studies indicate that tackling vaccine hesitancy requires more than isolated informational actions. It is necessary to understand the reasons for doubts, consider the inequalities that permeate decisions, strengthen trust in services and guarantee adequate access conditions. In this process, Nursing contributes through welcoming, evidence-based guidance and monitoring of the population, although research is still needed to evaluate the effects of these practices on vaccine hesitancy and behavior.

4 Final considerations

This qualitative narrative review made it possible to identify that vaccine hesitancy is related to different factors, especially the fear of adverse events, doubts about the safety and effectiveness of vaccines, misinformation and a lack of trust in vaccines and institutions. The studies also highlighted the influence of social, cultural and political aspects on vaccination decisions, in addition to the need to differentiate hesitancy from difficulties in accessing immunization services.

Regarding coping strategies, health education based on dialogue, the acceptance of doubts, the communication of reliable information and the use of face-to-face and digital educational resources stood out. Nursing played an important role by guiding families, clarifying false information, active outreach and monitoring the vaccination status.

The results of the publications showed advances in vaccination coverage, knowledge and attitudes towards vaccination. However, these outcomes do not necessarily demonstrate a reduction in hesitation, as few studies have directly evaluated this effect. Furthermore, the

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predominance of cross-sectional research, local studies and publications focused on COVID-19 limits the generalization of findings.

It is concluded that tackling vaccine hesitancy requires actions that consider the reasons for doubts, social contexts and conditions of access to vaccination. In this process, Nursing contributes to bringing services closer to the population and strengthening trust in immunization agents. However, further research is needed to evaluate the effectiveness of educational strategies and professional practices in reducing hesitancy and promoting vaccination.

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