

Population knowledge about the benefits of child immunization: an integrative review

RESUMO | Analisar através de evidências científicas, o nível de conhecimento da população acerca dos benefícios da imunização infantil. Método: Trata-se de uma revisão integrativa da literatura acerca dos benefícios da imunização infantil, publicada nos últimos 7 anos, dentro das seguintes bases de dados: SciELO, Science direct, biblioteca virtual em Saúde e PubMed. Resultados: Foram analisados 495 artigos, dos quais 7 artigos foram selecionados para esta revisão integrativa, a qual foi realizada de maio a junho de 2020. Foi possível perceber que há uma porcentagem ainda grande da população mundial que opta pela não imunização de suas crianças, onde a grande maioria se dá em países subdesenvolvidos, por falta de visibilidade da mídia e baixa escolaridade, principalmente. Conclusão: Campanhas de vacinação e esclarecimento sobre vacinas devem ser realizadas de forma sistemática.

Palavras-chaves: Vacinação em massa; Crianças; Pais e Imunização.

ABSTRACT | Objective: To analyze through scientific evidence, the population's level of knowledge about the benefits of childhood immunization. Method: This is an integrative literature review on the benefits of childhood immunization, published in the last 7 years, in the following databases: SciELO, Science direct, Virtual Health Library and PubMed. Results: 495 articles were analyzed, of which 7 articles were selected for this integrative review. It was possible to notice that there is a still large percentage of the world population that chooses not to immunize their children, where the vast majority takes place in underdeveloped countries, mainly due to lack of media visibility and low education level. Conclusion: Vaccination campaigns and information about vaccines must be carried out systematically.

Keywords: Mass vaccination; Kids; Parents; Immunization.

RESUMEN | Objetivo: Analizar através de evidencia científica, el nivel de conocimiento de la población sobre los beneficios de la inmunización infantil. Método: Se trata de una revisión bibliográfica sobre los beneficios de la inmunización infantil, publicada en los últimos 7 años, dentro de las siguientes bases de datos: SciELO, Science direct, Virtual Health Library e PubMed. Resultados: Se analizaron 495 artículos, de los cuales se seleccionaron 7 artículos para esta revisión integradora. Se pudo notar que todavía hay un gran porcentaje de la población mundial que opta por no vacunar a sus hijos, donde la gran mayoría se da em países subdesarrollados, debido a la falta de visibilidad en los medios y la baja educación, especialmente. Conclusión: Las campañas de vacunación y la información sobre vacunas deben realizarse de forma sistemática.

Palabras claves: Vacunación masiva; niños; Padres; Inmunización

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INTRODUCTION

The vaccine is considered one of the most effective and cost-effective health policies used throughout the world in the control and prevention of contagious infectious diseases, being one of the greatest achievements made by human beings and the best and safest means of preventing infectious diseases. (1,2)

A newborn's immune system is immature, making it more susceptible to acquiring infectious diseases. It is known that children are more vulnerable to infections than an adult.(3)

Therefore, it is imperative that children are vaccinated during their first five years of life, in order to prevent various diseases such as diphtheria, tetanus, whooping cough, meningitis, poliomyelitis, hepatitis B, tuberculosis,

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rotavirus diarrhea, yellow fever, measles, mumps and rubella. (4)

The adaptive immunity effect requires prior contact with antigens, while the innate system does not need prior immunological experience, innate immunity is the first line of defense against pathogens and is composed of the response of granulocytes, monocytes, macrophages, dendritic cells and natural killer. (3) It is indisputable that compulsory childhood vaccination policies contributed substantially to the success of vaccines, resulting in an increase in immunizations and a consequent reduction in the incidence of vaccine-preventable diseases. (1)

The success of a vaccination program is directly related not only to the increase in vaccination coverage rates, but also to the need for vaccines to have a high standard of safety and full acceptance by the population. (1)

Therefore, the objective of this work is to analyze the population's level of knowledge about the benefits of childhood immunization, using the integrative review.

METHOD

The present work is an integrative review from secondary sources on the theme "infant vaccination".

The integrative review allows the formulation of a problem, the literature search and, subsequently, the critical analysis of the data found. (5) Thus, the integrative review allows gathering and synthesizing research results on a delimited topic, in a systematic and organized way, this procedure helps to deepen the knowledge of the investigated topic. (6)

To carry out the survey of articles in the specialized literature, the following databases were used: Scientific Electronic Library Online (SciELO), Science Direct (SD), Virtual Health Library (VHL) and PubMed. The descriptors used to search the articles were: "Mass

vaccination (Vacinação em massa)", "Child (Criança)", "Parents (Pais)" and "Immunization (Imunização)". The electronic search for publications was carried out from March to May 2020.

For inclusion of articles, the following criteria were adopted: available in full, written in Portuguese, En-



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glish or Spanish, articles published between 2013 and 2021, which addressed the topic of knowledge of parents/population about childhood vaccination. As exclusion criteria were established: review articles and with other focuses.

Figure 1 summarizes the procedures involved in carrying out the bibliographic survey used in this research.

The selected articles were analyzed through a systematic and critical reading. The results were presented descriptively, using a table, in order to highlight the reasons why parents/guardians of children have not promoted their vaccination.

RESULTS

A total of 495 studies were identified, of which 488 were excluded for not meeting the inclusion criteria. However, 07 articles were considered for systematic review, 01 in the VHL, 01 in ScienceDirect and 05 in PubMed. Table 1 shows the summary of specifications for each of the articles selected to compose the integrative review.

The study carried out in Pakistan by Sheikh (2013) showed that the main fact of low vaccination coverage is associated with lack of parental knowledge, religious taboos, ethnicity, family income, number of children and paternal occupation. (9)

In Poland, it was observed by Mrożek-Budzyn and Kiełtyka, Mróz (2016), that mothers did not demonstrate as much confidence in current vaccine formulations and some did not have an opinion on the matter. (15)

Sohn, Lin, Jung (2018) conducted an analysis of countries in South and Southeast Asia: Bangladesh, Cambodia, Indonesia, Nepal, Pakistan and the Philippines. In these countries, mothers with higher authority and greater access to media had a higher rate of immunization than their children. (11)

Šeškute, Tamulevičienė, Levinienė (2018) observed that the main source of information is the internet, doctors and the media, however, only 57.3% of respondents knew that the vaccine offers efficient protection. Some mothers even said they wanted to vaccinate their children, but they still worry about adverse events. (14)

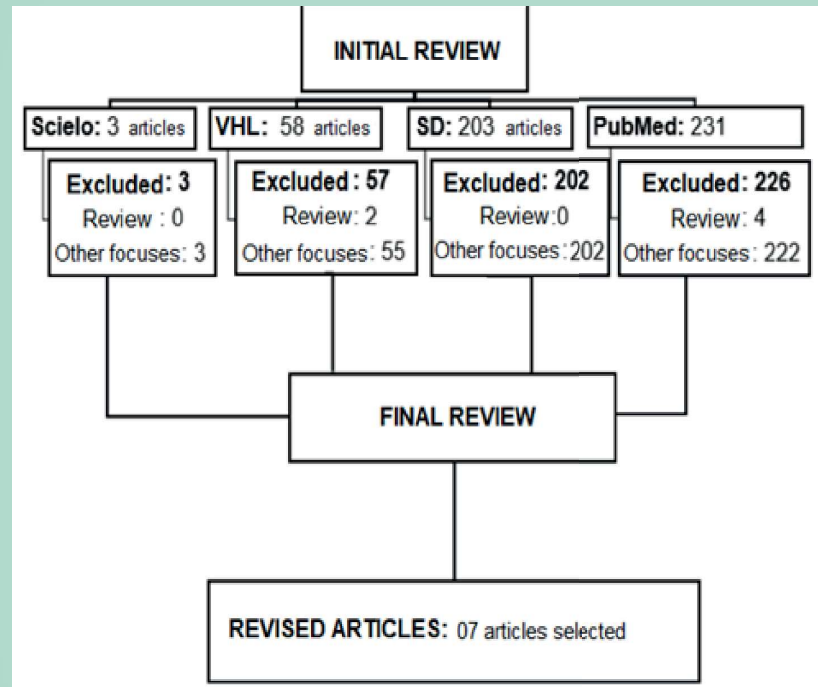
Noh et al (2018), in a work carried out in Sindh, Pakistan, they showed

that the age of children, the number of children, wealth, the level of education of the parents were associated with childhood vaccination in Pakistan. (10)

The study by Frew et al (2018) showed that in the US, although there is vaccination, there is still a portion of the population that does not immunize children, which led researchers to develop a questionnaire in order to monitor the reliability of parents in the process of vaccination of their children. If it is detected that the father does not trust the vaccination process, a clarification work can be prepared and applied with these parents.(13)

Cuong et al (2019), in a study carried out in Vietnam, he found that the father's decision is important for the act of vaccinating his children, although in some cases the mother participates in this decision. Although parents are aware of the importance of vaccination, few children have actually been immunized, as parents are too busy to worry and fear adverse events after vaccination. (12)

Figure SEQ Figure * ARABIC 1 - Flowchart illustrating the steps involved in the selection of articles.



Source: prepared by the authors, 2021.

Subtitle: Scielo (Scientific Electronic Library Online); VHL (Virtual Health Library) and SD (Science Direct).

Table 1 – The table illustrates the information from selected articles in the Science Direct (SD), VHL and PubMed databases for the elaboration of the integrative review.

Title of the article	Authors/Year	Journal	Objectives	Main results
Reasons for non-vaccination in pediatric patients visiting tertiary care centers in a polio-prone country	Sheikh et al.(9) (2013)	Archives of Public Health	Clarify the main reasons behind not getting full immunization coverage in Pakistan, fears about childhood immunization, and the main obstacles faced in pursuing vaccination	There is an urgent need to raise awareness in the media and social and religious organizations.
Opinions about vaccination among mothers who delivered newborns in two hospitals in krakow and myslenice	Mrożek-Budzyn, Kiełtyka, Mróz(15) (2016)	PRZEGL EPIDEMIOLOG	Determine the means of information that influence mothers in relation to immunization	Despite wide access to information sources, mothers of newborns often had incorrect knowledge of medical facts.
Effects of Maternal Decisional Authority and Media Use on Vaccination for Children in Asian Countries	Sohn, Lin, Jung(11) (2018)	MEDICINA MDPI	Investigate associations of maternal decision-making authority and media use in child immunization in six countries in South and Southeast Asia	It is important to implement programs and policies to promote maternal decision-making authority in South and Southeast Asian countries
Knowledge and Attitudes of Postpartum Mothers towards Immunization of Their Children in a Lithuanian Tertiary Teaching Hospital	Šeškute, Tamulevičienė, Levinienė(14) (2018)	MEDICINA MDPI	Assess the knowledge and attitudes of mothers about child immunization	The evaluations of postpartum women and their knowledge can be the main tool for better communication between health professionals and parents

Factors affecting complete and timely childhood immunization coverage in Sindh, Pakistan; A secondary analysis of cross-sectional survey data	Noh et al.(10) (2018)	PLoS One	Measure and determine factors influencing children's basic immunization coverage in Sindh (Pakistan)	Coverage is still low, it is necessary to implement educational interventions aimed at parents and a mass vaccination campaign
Development of a US trust measure to assess and monitor parental confidence in the vaccine system	Frew et al.(13) (2018)	Vaccine	Develop a Vaccine Confidence Index (VCI) capable of detecting variations in parents' confidence in their children's immunization	The VCI was developed to measure the level of parental confidence in vaccines, it can be a useful tool for future population monitoring and confidence in childhood immunization.
Gap in measles vaccination coverage among children aged 9 months to 10 years in Ho Chi Minh City, Viet Nam, 2014	Cuong et al.(12) (2019)	Western Pac Surveill Response J	Determine immunization coverage and reasons for non-vaccination among children aged 9 months to 10 years in six districts of Ho Chi Minh City	Vaccination coverage was lower than reported, in order to improve coverage, a mass vaccination campaign for health promotion against Measles should be considered

Source: elaborated by the authors, 2021.

As can be seen in Figure 1, currently, there is a low number of scientific articles that seek to understand the reasons why parents/relatives are not vaccinating their children/relatives. This fact has been happening in the world and in Brazil, given that, in this research, no article was found on this topic, with the descriptors used in this work.

DISCUSSION

Vaccines are efficient ways of artificially stimulating an active immune reaction, that is, inducing the organism to produce antibodies against a biological agent, without, however, acquiring the disease. (7) This method increased people's perspective and quality of life, especially in the early years of life.

However, anti-vaccination movements have been growing around the world and gaining strength and notoriety, mainly through social networks, which are used to spread false news (Fake News). As a result, parents of children report distrust regarding the effectiveness of vaccines and are afraid of possible side effects, which can cause serious harm to their children. They also report the economic interest of pharmaceutical industries in the sale of

vaccines, to the detriment of children's health. (8)

Studies carried out in Pakistan have shown that the decrease in the vaccination rate is related to the population's lack of knowledge, low income, number of children, paternal occupation, ethnicity, lack of access to the media and secondary factors such as religious taboos. Illegal migration between Afghanistan and Pakistan is still high, and most of these immigrants have not been vaccinated, increasing the risk of outbreaks caused by diseases transmitted by aerosols, for example. (9)

The low educational level of parents prevents them from adequately understanding the benefits of full immunization and knowledge of vaccine-preventable diseases. These results suggest that educational interventions aimed at parents with less education may have the potential to improve immunization coverage in Pakistan, where adult literacy was 54.9% between 2008 and 2012. (10)

Studies carried out in the Asian continent have shown that the improvement in vaccination coverage of children is significantly associated with the mother's willingness and use of the media in these countries. (11)

In Vietnam, the main reasons

for not vaccinating children are lack of awareness of parents about vaccination doses, lack of time for those responsible for the child and parents' reluctance to vaccinate their children for fear of adverse events after vaccination.(12)

Also in this study, it was observed that vaccination coverage is overestimated. For, data registered by the national system of vaccination in the wards showed that 82.4% of children had been vaccinated. However, this study found a vaccination coverage of only 54.9% of vaccinated children. (12)

In the US, vaccination coverage is high, however, it is estimated that 1 in 8 parents are "vigilant" when it comes to vaccination. While national coverage of childhood immunization remains at a level sufficient to mitigate large-scale sustained outbreaks, declining confidence in immunization could lead to declines in childhood immunization rates that could threaten the collective immunity developed by public health efforts in recent decades. (13)

Concerns about immunization were more likely to be related to inaccurate information rather than unpleasant direct experiences: the majority of mothers surveyed in this study knew that the vaccines given to their children were safe, while their experiences of

vaccine-induced adverse reactions and their concerns about the child's vaccination were not significantly related. (14)

Embora as opiniões das mães sobre a imunização das crianças sejam, geralmente, positivas, mesmo entre as mães que vacinaram seus filhos, quase uma em cada três não tinha certeza sobre sua decisão(14).

In Poland, vaccination campaigns have been increasingly observed and one of the studies analyzed in this review showed that most mothers consider vaccination an effective method of protecting their children against infectious diseases. However, some mothers admit that it is not an efficient method or they had no opinion about it. (15)

In this study, it was observed that mothers' confidence was greater for vaccines known for many years compared to new formulations. It is also added that many mothers are convinced that children receive too much vaccine,

in addition to admitting that children with chronic diseases should not be vaccinated. (15)

CONCLUSION

Media usage is very important. The media have always been allied with the dissemination of information for vaccination, however, with the development of social media (Facebook and Whatsapp), a large number of false news has been circulated, greatly contributing to the population's disbelief in the effectiveness of vaccines. This suggests that reducing communication inequalities to encourage mothers can also contribute to improving vaccination coverage for children in developing countries, in addition to alerting them to these false news and seeking information from health professionals.

Lack of information and low education also contribute to parents not immunizing their children, this fact

shows that the health team should offer information campaigns about vaccines to parents, trying to eliminate the factor - ignorance.

The lack of awareness of parents about the number of correct doses of vaccines to be administered to children and the importance of these vaccines is also a factor that affects children's vaccination coverage, since, in most cases, due to lack of this awareness, those responsible for children fail to vaccinate them for lack of time and fear of adverse events after vaccination, creating a major public health problem.

Therefore, the dissemination of vaccine campaigns and their benefits are of fundamental importance to achieve good vaccine coverage, this fact promotes a reduction in the spread of vaccine-preventable diseases. However, it is essential that parents seek medical advice and guidance at each appointment.

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