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THE NEGATIONISM OF ANTI VACCINE MOVEMENT

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ABSTRACT

Objective: To identify the causes of the vaccine refusal and thus the severities that the anti-vaccine movement reflected in the population. **Methods:** Extended abstract of the literature review, researched papers documents in the Virtual Health Library (VHL) databases, the Journal Coordination Portal of Improvement of Higher-Education Personnel (CAPES), Scielo (Scientific Electronic Library Online), and Google Scholar applying exclusion criteria. **Results:** In their study Hu et al, 2019, observed 24.9% of vaccine refusal, a higher percentage compared to a sample of 285, where 33.7% have doubt in relation to the efficacy of the vaccine, 34% distrust the pharmaceutical industry, 38.2% are concerned with the vaccine safety, and 37.2% do not consider the vaccine essential, strongly characterizing the anti-vaccine movement. Fonseca et al, 2018, study shows a smaller percentage of vaccine refusals, 0.14%, which is considered low. This result may possibly be related to educational level of the sampled population. 74% of the participants in his study had higher education degrees indicating a possible correlation between education levels and acceptance of vaccination. **Conclusion:** Results of this study shows a need for further research on the repercussions of the anti-vaccine movement. It also demonstrate a need for additional outreach programs based on awareness and education of the population regarding vaccination.

Keywords: Movement against vaccine. Refusal of vaccine. Vaccine immunogenicity.

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INTRODUCTION

The first immunization techniques were created by Edward Jenner, in the 18th century, from experiments and observation. However, it was only in 1870 that Louis Pasteur and Robert Koch discovered the presence of microorganisms and their link with diseases.² In Brazil, the first vaccine arrived in the 19th century, and it was only in 1900 that the Rio de Janeiro Serotherapeutic Institute and the Serumtherapy Institute were created. in São Paulo.³ The vaccine is considered a substance, and may contain fragments of pathogens, attenuated pathogens or even it, living or dead, where it will induce an immune response in the host, in this case, with the intent of producing antibodies, as well when in future contact with the infectious agent. the immune response will be effective in combating the antigen.⁴ In 1973, the national immunization program (PNI) was created with the intention of improving the immunization plan, being more qualitative, comprehensive, integrated, vigilant in an epidemiological and educational context with the purpose of raising awareness population according to the need for acceptance and use of vaccines, in this case, their notoriety. With PNI they controlled measles, accidental tetanus, neonatal tetanus, diphtheria, whooping cough, severe types of pneumonia, were eradicated in urban yellow fever in 1942, smallpox 1973 and polio in 1989, among other recent actions to control of various pathogens, such as rubella, hepatitis B, influenza.⁵ The anti-vaccine movement is based on adverse reactions, even minimal ones that can occur, due to the risk of using the antigen itself to induce the immune response and doubt about its effectiveness. One of the main causes of the increase in adherents to the movement is the lack of information, false disclosures by mainly media and social media, without credibility and monitoring.⁶ This movement started with a publication of an erroneous study that linked the development of autism to the vaccine. triple viral in 1998, disregarded later, but which influenced the growing movement around the world.

Between the years 2015 and 2016, it was possible to eradicate diseases with the manufacture of vaccines such as smallpox, rubella and measles, however, given the increase in campaigns and movements against immunization, it triggered new measles outbreaks in 2018, causing a setback of this conquest. When a population ceases to be vaccinated, it allows the growth of the circulation of infectious agents, compromising not only the supporters of the campaign, but the population as a whole, culminating in impact on health, society and the economy.⁷ Thus, considering the growing movement of anti-vaccine campaigns and the imminent danger of reintroducing diseases that have already been eradicated, the risk of indices of children who will develop diseases, irreversible sequelae and death will noticeably increase.⁷ Thus, this study aims to identify the causes the refusal of the vaccine and thus the severities that the anti-vaccine movement reflects in the population, through original research.

METHODS

The present study is an expanded summary of the literature review type. The work was done based on a search in the Virtual Health Library (VHL), Portal of Journals of the Coordination for the Improvement of Higher Education Personnel (CAPES), Scientific Electronic Library Online (SciELO) and Google Scholar. descriptors "movement against vaccine", "refusal of vaccination" where 572 articles were found in the VHL database and 211 in the CAPES database. Totaling 783 documents.

After analysis, applying the exclusion criteria, documents were removed whose theme was outside the research line, review articles, case reports and documents that were not available in their entirety, with the intention of selecting only original works. Works with more than 5 years of publication were also excluded. Totaling 7 works that were used to build a comparison table of percentage values referring to the characterizations and the reasons for vaccination refusal collected in each work.

RESULTS

The literature results found were divided into: sample, gender, academic level, vaccine refusal

/ hesitation, reason for vaccine refusal / hesitation and refused vaccines, organized as shown in the table below:

	Sandhofer, et al, 2017	Gilbert, et al, 2016	Masters, et al, 2018	Napolitano, et al, 2018
• Sample	350	5720	349	437
• Gender				
Male	45%	-	98,28%	17,9%
Female	55%	-	1,72%	82,1%
• Academic level				
Fundamental	65%	34%	37,28%	-
Medium / technical	22%	35%	27,75%	-
Higher	11%	28%	17,92%	46,9%
None	-	-	17,05%	-
• Vaccine refusal / hesitation	11%	14,4%	3,74%	18%
• Reason for refusal / vaccination hesitation				
Insufficient knowledge	11%	16,5%	-	-
Fear of adverse effects	9%	30%	14,29%	-
Doubt about effectiveness	4,5%	2,5%	-	-
Affects the immune system	2,5%	-	-	-
Distrust of the pharmaceutical industry	9%	-	-	-
Concern about vaccine safety	-	4%	-	-
Vaccine considered unnecessary	-	2,6%	-	-
Fear of needles	-	-	85,71%	-
Forgetfulness	-	-	-	18,5%
Lack of recommendation by pediatricians	-	-	-	35,1%
• Resused vaccines				
Varicella	-	-	-	68,5%
Rubella	-	-	-	19,2%
Measles	-	-	-	19,2%
Mumps	-	-	-	19,2%
	Hu, et al, 2019	Mizuta, et al, 2019	Fonseca, et al, 2018	
• Sample	285	92	86	
• Gender				
Male	16,1%	51,09%	82%	
Female	83,9%	48,91%	18%	

<ul style="list-style-type: none"> Academic level 			
Fundamental	13,7%	-	5%
Medium / technical	33,7%	57.61%	21%
Higher	52,6	42,39%	74%
None	-	-	-
<ul style="list-style-type: none"> Vaccine refusal / hesitation 	24,9%	20,65%	0,14%
<ul style="list-style-type: none"> Reason for refusal / vaccination hesitation 			
Insufficient knowledge	-	-	1,69%
Fear of adverse effects	-	92%	10,73%
Doubt about effectiveness	33,7%	-	7,34%
Affects the immune system	-	-	3,39%
Distrust of the pharmaceutical industry	34%	-	-
Concern about vaccine safety	38,2%	-	18,07%
Vaccine considered unnecessary	37,2%	-	-
Fear of needles	-	-	-
Forgetfulness	-	-	-
Lack of recommendation by pediatricians	-	-	-
<ul style="list-style-type: none"> Resused vaccines 			
Varicella	-	-	-
Rubella	-	-	19,77%
Measles	-	-	19,77%
Mumps	-	-	19,77%

In the study by Sandhof, et al, 2017, insufficient knowledge (11%) about the benefits of vaccination, uncertainty and fears (9%) is mirrored in the vaccination hesitation of 11% among the sample of 350 individuals. In the case series published by Masters, et al, 2018, there is a greater refusal / hesitation in vaccination, suggesting that it is directly related to the public of respondents in this study, being more afraid of the adverse effects of the vaccine (30%) coupled with a concern with safety vaccine (4%) and because they consider vaccination unnecessary (2.6%). In Napolitano, et al, 2018 there is a predominantly female interviewee profile (82.1%), there is a relative vaccination refusal (18%) being directly linked to

forgetfulness problems (18.5%), being the only study that describes the reason for the hesitation to be due to lack of memory, possibly related to the lack of recommendation by pediatricians (35.1%), since there is not a strong awareness on the part of the multidisciplinary health team, it will result in a lack of engagement on the part of the patient . It is important to highlight that among the results analyzed, Hu, et al, 2019 with (24.9%) had the highest vaccine refusal, with an index in relation to doubts about the vaccine's efficacy, distrust of the pharmaceutical industry , concern about the safety of the vaccine and the vaccine not being considered essential by the interviewees (37.2%) strongly characterizing the anti-vaccine movement. The higher level of

education appeared to be influential, in the study by Fonseca, et al, 2018, where a reduced number of vaccine refusals (0.14%) was found, with a low rate of vaccine hesitation, in a sample that 74% of the interviewees had higher education. Therefore, it is worth mentioning that the idea that “vaccines are not a priority”, “are unsafe” and “fear of side effects”, reasons most frequently invoked by parents, are part of one of the three determining factors for not vaccine adherence. Health professionals are important opinion makers and educational multipliers about the importance of vaccination and the reduction of false information.

CONCLUSION

The information present in the literature so far shows factors that trigger the rise of the global anti-vaccine movement, which causes the reappearance of cases of outbreaks of infectious diseases, which were previously eradicated or controlled. However, there is a deficit of studies with significant samples, to study the causes of the vaccine refusal, thus being able to enter in the combat of the same. There is a need to produce research with a more comprehensive sample, research aimed at obtaining more specific and clear information about the main reasons for the rejection of vaccination immunization.

It is clear, therefore, that the reasons for the problem in question must be combated, since immunization, since, as it has been verified in this and other studies, is scientifically effective to prevent and mitigate diseases, benefiting public health and quality. of the population.

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