

The Universal Problem that Grows like Avalanche: Vaccine Opposition-Vaccine Rejection and Responsibilities of Nurses

Abstract

Vaccine rejection is a behavior that threatens public health, not individual freedom. In the rejection of the vaccine about the vaccinations of the parents; "Thinking that the ingredients are harmful, not paying paid vaccines financially, thinking that sin is a religious belief, not believing that the vaccine is useful, thinking that vaccines may be produced in the future due to vaccines, thinking that vaccines are produced for financial purposes by pharmaceutical companies". It is an expected situation that this increasing problem in the world and in our country poses serious health threats, causes social problems and will continue to open. It is important to analyze the rejection of the vaccine in more detail, to determine what needs to be done for the solution, to disseminate the studies and to develop policies in the country and around the world with the existing study results. Nurses have important responsibilities in providing support and counseling using the necessary communication techniques with parents in the event of a vaccine rejection possible. This review article was written to draw attention to the responsibilities of the nurse by detailing the issues of vaccine anti-vaccine rejection.

Keywords: Vaccine, Vaccine adversity, Vaccine rejection, Nursing

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Sapçı E, Güngörmüş Z. The Universal Problem that Grows like Avalanche: Vaccine Opposition-Vaccine Rejection and Responsibilities of Nurses. *J Educ Res Nurs*. 2021; 18(3): 352-355

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Submitted: September 11, 2020
Accepted: May 15, 2020



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Introduction

Vaccination is one of the most important preventive public health tools that can be applied to healthy and high-risk populations of all ages in terms of preventing vaccine-preventable diseases and related disability and premature death.^{1,2} The immune system is immature in newborns and young children and develops up to 6 years of age. During this period, infants and children are at risk for infectious diseases.² Immunization, which is one of the low-risk public health services that prevents infectious diseases in infants, children and adults, is very important.²⁻⁴

Vaccination programs increase the quality of life, reduce the frequency of vaccine-preventable diseases and health expenditures and not only protect vaccinated individuals but also prevent the transmission of the disease to unvaccinated individuals in the community.^{2,5,6} For this reason, every individual who is not vaccinated causes many newborns, infants and children, who are not yet in the vaccination period or whose vaccination has not been completed yet, contact with the factor that causes the disease in the early period and die. In unvaccinated adolescents and adults, contact with the causative agent can transmit existing agents to many children and adults and cause high levels of mortality.^{1,2,7} According to the World Health Organization (WHO) vaccine report published in March 2018, global vaccination can prevent 2-3 million deaths each year. In recent years, the global vaccination rate is about 85%. It was also stated that increasing the existing immunization rates to the targeted level could prevent an average of 1.5 million more deaths per year.⁷

According to the reports prepared by the World Health Organization and the United Nations International Children's Emergency Fund (UNICEF), the definitions of vaccine hesitancy and vaccine rejection are different. Vaccine hesitancy is the rejection or delay in acceptance of the vaccine, despite the vaccine being available. Here is a situation where one or more vaccines are rejected. However, in rejection of vaccination, the person does not have all vaccinations of his own free will.⁸⁻¹⁰

Although the vaccination hesitancy process is graded as partial acceptance, delay, partial rejection between complete acceptance of vaccination and rejection of vaccination; It is stated that it varies in complexity and context according to time, place, vaccines. It was determined that this scope does not include groups who were not informed about vaccination, lacked access to vaccines and had limited access to vaccination clinics.⁸

Vaccine indecision in societies is seen at a higher rate than anti-vaccination. Vaccination opponents form a heterogeneous group. While they may accept some of the vaccines, they may not have some, delay the vaccine or refuse to be vaccinated altogether.^{11,12} In this review article, it is aimed to create a resource that nurses can benefit from by explaining the concepts of vaccine opposition-vaccine rejection, history, reasons and nurses' responsibilities.

Vaccine Opposition-Vaccine Rejection in the World and in Turkey

Looking at the history of the vaccine, until now, vaccines have been accused many times, and it has been seen that vaccine opposition movements have caused various discussions about vaccines simultaneously with the discovery and application of vaccines. For example, in England, where there was a smallpox epidemic in the 1800s, as a result of the compulsory vaccination of the public without adequate information and heavy penalties for those who did not receive the vaccination, a reaction against the practices emerged in this period and a section of people who did not believe in the effectiveness and reliability of the vaccine was formed.⁸

The concepts of "vaccine hesitancy-vaccine rejection" emerged about 20 years ago in the world and the number of people rejecting the vaccine has continued to increase. Due to the decrease in vaccination rates, there has also been an increase in vaccine-preventable diseases. Looking at the 2019 global figures, it was stated that the number of measles cases reported was 869.770.¹³ Similarly, there was a significant increase in measles case reports in Europe in 2011, and it was determined that 85% of them were not vaccinated or registered.¹¹ The increase in measles cases includes the Rockland area of New York, USA. As of 29 March 2019, 153 measles cases were detected in the region and a state of emergency was declared due to this measles epidemic. In this case, within the scope of the emergency measures plan, unvaccinated children are prohibited from entering public places such as schools and shopping centers for 1 month.⁷

Due to the increasing vaccine opposition campaigns in recent years, the World Health Organization established a working group to investigate vaccine rejection in 2012 called the Vaccine Hesitancy Working Group. In addition, "vaccine opposition" was among the 10 global health problems that WHO plans to solve in 2019. With the rapid increase in vaccine rejection cases in our country in recent years, the Ministry of Health has created a web page called "asi.saglik.gov.tr" in order to provide accurate and healthy information about vaccines and to raise social awareness.⁷ Vaccine opposition has been increasing in Turkey in recent years. While the number of families who refused to be vaccinated in Turkey was 183 in 2011, it increased to 980 in 2013, 5400 in 2015, and 12.000 in 2016. In the statement made by the Turkish Association of Clinical Microbiology and Infectious Diseases, it is stated that the number of families who have not vaccinated their children has increased to 23.000 as of 2018. Vaccination rate in Turkey fell from 98% in 2016 to 96% in 2017. Although there were 85 measles cases across the country in 2017, 44 measles cases were seen in the first 3 months of 2018. As a result, measles cases have increased from 0.01 per 100.000 people in 2016 to 0.10 per 100.000 people today. Although the vaccination rate of each vaccine has exceeded 95% in the past ten years, it is estimated that if the vaccine rejection continues and the number of vaccine refusals reaches 50.000, it will reach epidemic proportions, but it is predicted that the vaccination rate will decrease to 80% after about 5 years. Therefore, it will be possible that the continuation of the vaccine rejection situation may become a growing health threat on the society in the future.⁷

Vaccination Opposition and Vaccination Rejection Reasons

There are many factors that affect vaccine rejection. Among them, government policies, mistrust, industry, medical community (medical journals, healthcare professionals), politicians, ignorance, increased number of vaccines, negative past experiences, internet/media/celebrities, increase in autism cases, alternative and complementary medicine, research works or surveys, religious groups and anti-vaccine groups.^{11,14} When some of these reasons are exemplified by studies, in a study conducted in Australia in 2017, distrust in the pharmaceutical industry (23.1%), doubting about the effectiveness of the vaccine (35.9%) and fear of the side effects of the vaccine (35.9%).¹⁵ In another study conducted in India, it was determined that they refused the vaccine due to lack of knowledge (52.4%) and side effects of the vaccine (28.8%).¹⁶ Again, in a research review written by Chan et al.,¹⁷ the majority of the vaccine rejection rate was due to religious beliefs (67.1%). In a study conducted in Turkey, in addition to these reasons, it was determined that the vaccine would cause infertility (6.7%).³

According to the Vaccine Workshop Results (2018) held in our country, among the reasons for vaccine rejection are religious reasons, trust problems related to the vaccine content, fear of the side effects of the vaccine and negative news in the media, being a family member of foreign origin have been reported.¹⁴ According to the study of Ready (2018), the reasons for vaccine rejection are not believing that the vaccine is useful or necessary (22.8%), thinking that it is a sin in terms of religion (22.8%), fearing that different types of diseases may occur in the future due to vaccines (20.7%), having thoughts that the substances in its content are harmful (46.7%), thinking that it was produced for financial purposes (14.1%), not being able to afford the paid vaccines financially (46.7%) and other reasons (17.4%).²

Although awareness of vaccination has increased over time and the resistance to vaccination has decreased with the various policies implemented, resistance to vaccination has come to the fore again in recent years, and anti-vaccine and vaccine opposition concerns have started to increase again. When we look at our country, some content has been shared in the media regarding the vaccine, especially since 2010, with the advancement of technological developments and the ease of access to the media. Some of these posts affected families and re-discovered the negative views of families about "vaccine rejection". In an article published in the *Lancet* in 1998, it was written that there is a relationship between autism and MMR (Measles-Mumps-Mumps) vaccine. This article has aroused great repercussions all over the world, including Turkey. Despite the withdrawal of this article in 2010, its negative impact on families continued.^{8,18}

Other studies on the claim that mercury in vaccines causes autism have not found any evidence for this. However, this was not enough and vaccination rates continued to decline. In this context, the United States reported that mercury was removed from the content of vaccines in order to prevent a decrease in vaccination rates in 2011. In our country, the Ministry of Health reported that mercury-free vaccine was started in 2009. It is observed that the media and public opinion have an impact on the increasing vaccine opposition in our country. In addition to propaganda such as "diseases caused by vaccines" shared through social media and similar sites created by mothers, families who did not receive vaccination as an example were also very effective in vaccination refusals.^{8,19-21} In our country, the most striking example of this is that a prosecutor was brought to court for not having Hepatitis B vaccine in his children in 2015, and he was justified by the court for not vaccinating with a defense that he suspects that vaccines would permanently cause

medical harm to his children in the long term. After this incident was reflected in the newspapers and social media as “the prosecutor who did not vaccinate his twin babies won the law”, it was observed that groups formed through many “religious and philosophical active” people increased the discourse on vaccine opposition. Increasingly, these and similar events have affected the parents and brought their children not to be vaccinated in line with their own wishes.^{6,22}

People who have a vaccine opposition view have argued that alternative and complementary medicine can be used to protect against diseases, so that these approaches can be healthier than vaccines. In a study conducted in Australia, it was seen that families who refused the vaccine applied to alternative medicine methods more frequently. In addition, those who use complementary medicine methods think that these methods are more natural, do not contain chemicals and have no side effects. In fact, these methods, called alternative and complementary medicine, can help medical treatment, but they cannot replace medical treatment.^{7,8}

Since the 1800s, people have opposed vaccines for different reasons. Although the vaccine problem still continues, it is a matter of discussion in the world as well as in our country. The World Health Organization drew attention to the anti-vaccine movement in its 2019 health threats list and pointed out that a 5-year strategic plan aimed at creating a healthier world for all will combat vaccine hesitancy.⁸

Nurses Responsibilities in Vaccine Opposition and Vaccine Rejection and Importance of Immunization

From the vaccine production stage to the application stage, many individuals and institutions have an important place in the protection of infants and young children from diseases. These individuals and institutions have responsibilities in reaching the expected vaccination service goals. In addition, developments in the field of health and the change in state policies on child health also affected nurses and caused changes in the roles of nurses in the protection of child health.²

Nurses play the role of educators, researchers, planners and practitioners in vaccination. From the creation of the vaccination plan to the evaluation of the results, the nurse should be very conscious of the content of the vaccine, storage conditions, side effects, benefits, possible diseases that may occur without the vaccine, vaccination time and dose. In addition, the importance of vaccination should be explained to parents individually and socially, the vaccination status of their infants/children should be learned from parents who come to the institution for any reason in public health, and every opportunity should be taken to identify those who are undervaccinated.^{2,23}

In vaccination, maintaining the effectiveness of vaccines is another important issue. What is important in effective vaccination, to comply with the cold chain rules and general principles in the vaccination process, to understand the contraindications of the vaccine and to take preventive measures to prevent possible side effects after vaccination. On the other hand, keeping accurate and regular records in healthcare institutions where vaccination is administered is important in terms of vaccination follow-up.^{2,23}

The date of the vaccination, to whom it was given, the dose, contact information, which vaccination was given, the time of coming to the next vaccination should be recorded. Vaccination cards should be given to families and the importance of keeping the card throughout the school years should be explained.^{2,24}

An important issue in vaccination is to keep the side effects that may develop after vaccination under control. Reaction after vaccination

worries the family and may lead to vaccine rejection. In this context, it is important to inform the parents about the vaccine and its side effects by the nurses and to discuss the precautions in detail. In addition, families should be informed and warned about the risks that may occur if the vaccine is not given. While sometimes side effects are accepted as contraindications and vaccination is postponed, on the other hand, serious side effects may occur as a result of vaccination when the actual contraindications are not known. Therefore, nurses should closely follow up-to-date information about vaccines and know the side effects and contraindications of vaccines.^{2,23,24}

Parents may refuse to vaccinate their infant/child for any reason. In this case, it is important that nurses provide effective communication with parents. It is known that the frequency of vaccination increases after necessary and appropriate information. Nurses should support parents with initiatives such as determining the reasons for the rejection of the vaccine, taking time for families to share their concerns, providing more detailed information about the benefits of vaccines and the side effects that may occur after vaccination.^{2,25}

Educating the society through nurses will contribute to the prevention of infant/child mortality, the prevention of multiple diseases and the effective maintenance of immunity.²

Conclusion

From past to present, negative attitudes and attitudes towards vaccines have continued to occur. In order to prevent existing or potential negative attitudes towards vaccines, individuals should be followed up regularly after vaccination and careful attention should be paid to their side effects. Considering that the positive benefits of vaccination outweigh the negative benefits that may arise in the process, the reasons for these negative thoughts should be investigated. Due to the sensitivity of the problem, it should be ensured that media and health workers are more cautious and sensitive. Especially nurses working in primary care have great responsibilities in this context. Nurses are advised to take necessary nursing approaches to parents in case of possible vaccine rejection. In addition, it would be a useful practice to include courses on anti-vaccination and this approach in the education curriculum of nurses and other healthcare professionals, in terms of ensuring social trust regarding vaccines.

Considering that all parents may hesitate about vaccinations and refuse to vaccinate their children with all vaccines, preparation should be made in this regard. By coping with the vaccine instability-vaccine rejection problem, in order to transform the negative thoughts of individuals into positive, the number of studies in this field should be increased and appropriate solutions should be provided for the results of these studies. Along with this kind of work that can be done, establishing an environment of trust with the help of good communication between nurses and other health professionals with the individuals who will be vaccinated and their parents; thus, it will be an important factor in experiencing vaccine indecision or preventing vaccine rejection. It is thought that sharing the results of these studies with the individuals in the society and using the mass media in this sharing will contribute positively.

Author Contributions: Concept – E.S.; Design – E.S.; Supervision – Z.G.; Writing – E.S. Z.G.; Critical Reviews – E.S. Z.G.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors have no conflict of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

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