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# THE ROLE OF HEALTH EDUCATION IN SHAPING YOUNG PEOPLE'S ATTITUDES TO PROTECTIVE VACCINATIONS

Health behavior, shaped from early childhood, is an integral part of the socialization process taking place under the influence of various factors. They are present in the educational environment – the family, school or the peer group – but also in advertising and contemporary media. A young person does not invent their lifestyle for themselves, but develops it based on the data and patterns offered by the environment. It is those closest to them who pass on the basics of upbringing, patterns of interpersonal behavior, as well as shaping the child's habits, including health habits. This is why so much importance is attributed to health education, which aims to help cultivate the desirable attitudes in young people. Properly implemented, it allows them to get to know themselves and their environment (physical and social) better, understand the interdependence between the three basic dimensions of their health and thus make informed choices to improve their health (Cianciara, 2010). Especially in the face of the global COVID-19 pandemic, the issue of health behavior and a rational approach to immunization has become one of the key issues of education in the public health space.

The universal obligation to undergo immunization against selected infectious diseases ensures a sufficiently high percentage of immunized people and effectively reduces the risk of an epidemic spreading in the population. It is important to

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be aware that failure to vaccinate one child can have a negative impact not only on its health, but can negatively affect the entire environment, family members, and other children. It is thanks to vaccinations that the epidemiological situation has changed both in Poland and around the world (Augustynowicz & Wrzesinska-Wal, 2013). Some infectious diseases such as smallpox (all over the globe), diphtheria and polio, referred to as Haine-Medina, have been eliminated for many decades. The incidence of many other infectious diseases has declined, such as pertussis, formerly known as whooping cough (Michalak, 2005). Although some time ago it would kill a lot of children, the disease was eliminated just thanks to vaccination (Majchrzyk-Mikuła, 2013). Currently, it is on the rise again due to the growing reluctance to vaccinations and, ultimately, to give up. Thus, the issue of health awareness and health-seeking behavior of young people in particular should be the primary task facing modern education. Vaccination education is crucial and should be carried out from an early age. Reliable and well-established knowledge is the best weapon against disinformation, widely spread today by so-called anti-vaccine influencers.

## 1. THE PUBLIC'S ATTITUDE TOWARDS VACCINATIONS

Recently opinions have been heard that childhood diseases should be survived (Gawlik et al., 2014; Pieszka, Waksmańska, & Woś, 2016). However, one should be very cautious about making such statements, as many of them can have a severe course, dangerous consequences, or even death. For example, the measles virus can cause severe complications, especially neurological ones. So, is it worth exposing children to such suffering? The effectiveness of measles vaccines is very high – two doses of the vaccine ensure protection for at least 95 percent of children.

However, it turns out that despite the rational arguments in favor of vaccinating children, implementation is now becoming a huge challenge, as many parents are refusing to vaccinate their children. Between 2005 and 2010, about 4,000 children were not vaccinated due to parental refusal. In 2012, the figure was already approximately 5 thousand, 16 thousand in 2015, and in 2016 the number increased to more than 20 thousand. In 2018, twice as many parents had already refused to vaccinate as the year before (Redmerska, 2023). These data are compiled annually on behalf of the Chief Sanitary Inspector based on quarterly reports. The above information indicates that every year the number of unvaccinated children is growing very rapidly, a trend that is alarming. Epidemiologists are

warning: if the number of parents opting out of vaccinations continues to grow exponentially, the danger of epidemics of infectious diseases, including those described as *old*, long eliminated in our country, will return (Kaczorowska, 2024).

The usual concern among parents is the effectiveness and safety of vaccines. Besides, negative attitudes toward vaccination have been present in the human population for centuries. The controversy over active immunization began as soon as the smallpox vaccine was invented by Edward Jenner in 1796, and was still causing much excitement a century later (Magdzik & Naruszewicz-Lesiuk, 2001). Today, despite the significant achievements of modern vaccinology, there are still critical opinions denying immunization as an ineffective and unsafe form of infection prevention.

In recent years, the growing popularity of anti-vaccine movements has been posing a huge risk, leading to a deterioration in the immunization status of the population against certain infectious diseases. Contributing to this has been the information about vaccines provided by this organization, which aims to inhibit any efforts at mass vaccination. This is most often done by spreading theories or hypotheses about their ineffectiveness and harmfulness. The allegations of representatives of anti-vaccine movements include their early use, the large number of vaccines, the harmfulness of the substances they contain, complications after vaccination (autism, allergies, autoimmune diseases) (Bernatowska & Pac, 2011; Offit, 2010; Andrzejewska, 2013). From an analysis of the data in the literature, it appears that there are no scientific reports that confirm these concerns of parents.

Anti-vaccine movements were born in the world at a time when people were no longer afraid of infectious diseases. The fashion for leaving children without vaccines has also reached Poland, and the number of supporters of the theories propounded by the movement is growing (Leszczyńska et al., 2016). Parents who have given in to the trend do not realize that dangerous infectious diseases against which vaccinations once protected them are returning with a vengeance. Of course, currently most infectious diseases in children are milder than in the past. However, it should be emphasized that any infectious disease can pose a risk of complications.

A negative example of the spread of false information about vaccination was the unreliable research of Dr. Andrew Wakefield, who put forward the concept of a link between vaccination against measles, mumps, rubella and autism. Although the theory was repeatedly challenged, the author was accused of a number of methodological errors made during the study, there was a significant drop in the number of immunized children in the UK and other countries after his findings were published in 1998 in the well-known and respected journal *The Lancet*.

A further consequence of that were outbreaks of measles. The journal removed Wakefield's articles from its archives, considering the evidence presented in the publication to be false. Anyway, the author himself finally admitted that his paper had been manipulated. It was paid for by parents of children who had autistic behavior before vaccination to obtain compensation from pharmaceutical companies (Godlee et al., 2018). Despite the retraction of the publication from *The Lancet*, the false claim continues to be circulated and is causing concern among parents.

Currently, one of the sources of dissemination of information about the harmfulness of vaccinations are websites/portals, whose users are most often young, educated "modern parents" who want to live in harmony with nature. They have access to unverified information about the harmfulness of vaccinations and dangerous complications associated with their administration. They are raising concerns and doubts, while at the same time causing an increase in the number of children whose caregivers evade mandatory vaccination.

Therefore, solid knowledge, based on reliable information about infectious diseases, and the immunity of vaccinated children can significantly affect their attitudes to vaccination. Therefore, it is so important to build awareness among the public about the role of prevention in the health not only of children, but also entire families. It is extremely important that reliable information about vaccines should already be available to young adults, so that in the future, when they become parents, they will make the right decisions about mandatory vaccinations for their children. And it is the family, as the most important, basic social group, on which the whole society is based, that is the child's first educational environment. It is those closest to the child who pass on the basics of upbringing, interpersonal behavior and also shape the child's habits and habits, including health habits. Attitudes formed in the family environment are the foundation of adult life, which will translate into the next generation and their health situation. Parents should not only legally but also morally be responsible for the health of their own children. They should recognize the importance of health education in human life, but also expect this issue to be taken seriously by the institutions responsible for it, including educational institutions (Haberko, 2020). So, it is to be hoped that the ongoing debate over the introduction of the subject of health education in schools as of September 1, 2025, will fill this gap. As announced by the Ministry of Education, the new subject is expected to cover a wide range of topics related to mental health, nutrition, sex education, addiction issues and prevention. Also included in the scope of broad prevention is the issue of immunization. In order for the initiated process of change to bring the desired results, health education activities should be carried out with full substantive and

methodological preparation, not only by educators, health promoters, but also by teachers, educators. The thematic areas of health education, as well as the forms of work, should be adapted to the needs of the group, but also to the people who will educate. The purpose of health education is not only to impart knowledge, but to encourage people to use it, taking actions that promote health (Woynarowska, 2024). Thus, educating young people should begin as early as possible, and, above all, facilitate and provide reliable and necessary information for easy adoption. Planning education in accordance with the principles of the organized action cycle has a significant impact on changing attitudes, especially on breaking down barriers related to the lack of acceptance of immunization. Inadequate choice of topics, scope of activities or lack of appropriate qualifications contributes to increased levels of ignorance about prevention including prevention of many diseases through vaccination. This has huge consequences in terms of destroying previous successes in the fight against infectious diseases.

## 2. CHARACTERISTICS OF THE RESEARCH

For the purpose of this study, 35 young people, aged 20, were surveyed in January 2025. They were second-year students of preschool and early childhood education (future teachers). The choice of students for the study was dictated not only by the desire to know their opinions on immunization. It was also important to take into account the direction of their training as future teachers, on whom the formation of beliefs and attitudes, including health-promoting attitudes of their students, including on immunization, will largely depend.

The research was qualitative. Female students were asked to write a free speech about immunization and educational needs in this area. The main research problem was contained in the question: What is the importance of immunization for human health and life according to the adolescents surveyed?

## 3. ANALYSIS OF RESULTS

My analysis of the students' free statements on their attitudes toward immunization made it possible to distinguish four main areas raised in their statements:

- assessment of existing knowledge about vaccination,
- attitudes of the respondents toward immunization,
- factors shaping young people's attitudes toward immunization,

– educational needs on vaccination issues.

The first area highlighted in the respondents' statements was an assessment of the knowledge that respondents already have regarding immunization.

Table 1. Self-assessment of knowledge about vaccination

| | **Response categories** | **No. of responses** |
|---|---|---|
| 1. | High level of knowledge about vaccination | 9 |
| 2. | Sufficient level of knowledge about vaccination | 21 |
| 3. | Average level of knowledge about vaccination | 3 |
| 4. | Low level of knowledge about vaccination | 2 |
| 5. | Very low level of knowledge about vaccination | 0 |

*Note*. Own compilation based on qualitative research performed, $n = 35$.

Female students participating in the survey rated their level of knowledge regarding immunization well. They described it overwhelmingly as sufficient and high. They justified the term "sufficient" most often by the fact that at their age they do not need to expand the knowledge they already have about immunization. In addition, some of the respondents rated their knowledge on the subject highly. This was mainly due to their interest in issues related to broader health care and adherence to health-promoting principles in their lives. Only a few respondents indicated a low level of knowledge in this area, saying there was no need to expand their knowledge in this area.

Here are some examples:

– *I consider my knowledge of vaccinations sufficient. I know what interests me at this stage of life. I don't know the vaccination calendar or the exact process of creating vaccines, because I don't think I need that knowledge at this point.*

– *I believe that I know a lot about immunization. In recent years this topic has been publicized, so I began to take an interest in it. I think I know enough at this point.*

– *My health has always been important to me. I am interested in healthy eating, sports, and relaxation. I also became interested in vaccines. I have a lot of knowledge on this subject.*

– *I have a lot of knowledge about vaccines. In my immediate family, there are people with medical training. I draw proven knowledge from them.*

– *I rate my knowledge of vaccinations as very good. I know a lot and that is enough for me at this point.*

Another issue raised by the surveyed in their free statements is their attitude toward immunization. The categories of statements are included in the table below

Table 2. Respondents' attitudes toward immunization

| | **Response categories** | **No. of responses** |
|---|---|---|
| 1. | Definitely positive | 9 |
| 2. | Rather positive | 24 |
| 3. | Inert | 2 |
| 4. | Rather negative | 0 |
| 5. | Definitely negative | 0 |

*Note*. Own compilation based on qualitative research performed, $n = 35$.

Almost all of those surveyed declare a positive attitude toward vaccination. It is worth noting that among the statements analyzed, there were none indicating a negative attitude toward vaccination. The vast majority of respondents declare that their attitude to vaccination is rather positive or definitely positive. It should be noted that all respondents are unanimous in their positive attitude towards immunizations resulting from the vaccination calendar. Respondents approach voluntary, additional vaccinations with slightly more reserve. They are not fully convinced of their effectiveness and the rightness of their use. However, they mostly emphasize their doubts and concerns or lack of full knowledge on the subject rather than denial.

Below are some excerpts from the respondents' statements:

– *My attitude to vaccinations is rather positive. This is due to my trust in doctors and medicine, which, although not flawless, strive for the good of the patient.*

– *The topic of vaccinations raises many conflicts. Personally, I think it is good that there are some mandatory vaccinations. This results in reductions in infections and epidemics among young children, especially in kindergarten and school.*

– *I am definitely in favor of mandatory vaccinations (childhood vaccinations). On the other hand, I am not entirely convinced about additional vaccinations. There is different information about it. I have concerns.*

– *I believe that vaccinations should be mandatory because they are crucial for public health. Instead, additional vaccinations are often recommended to increase protection against certain diseases. It seems to me that a small number of people know about supplementary vaccinations.*

*– Personally, I support mandatory vaccinations that protect the public against dangerous diseases such as measles, polio and tuberculosis, because they are crucial for public health and social security. At the same time, I am skeptical of supplementary vaccinations, such as those associated with COVID-19. I don't know if they are effective.*

Another important issue addressed by the respondents was their identification of factors that influence the formation of young people's attitudes toward immunization (Table 3).

Table 3. Factors shaping young people's attitudes toward vaccination

| | **Response categories** | **No. of responses** |
|---|---|---|
| 1. | Beliefs and views held in the social environment/among peers | 17 |
| 2. | Family | 16 |
| 3. | Trust in the health care system | 16 |
| 4. | Information campaigns in the media | 13 |
| 5. | Social media | 10 |
| 6. | Own experience | 10 |
| 7. | Emotions (fear, uncertainty, fear of negative effects of vaccination) | 9 |
| 8. | Anti-vaccine campaigns | 6 |
| 9. | Health education at school | 2 |

*Note*. Own compilation based on qualitative research performed, $n = 35$.

There are many factors that, according to the students surveyed, influence the formation of young people's attitudes toward immunization. Among the most important of these, respondents included beliefs and views commonly held by the public. Of particular importance to young people is the opinion of their peers. Also of great importance is the family and its opinions on the subject, as well as the level of trust in the health care system. Respondents stressed the importance of verified and reliable information on the effectiveness of vaccination and clarifying ambiguities and concerns. Therefore, in a different context, respondents pointed to information campaigns in the media and social media. The latter were often cited as a source of vague or untrue information.

For the students surveyed, their own experiences and emotions – fear, apprehension, uncertainty – were also important in shaping attitudes toward vaccination. These were mainly due to misinformation in this area. A small group

of students also pointed to anti-vaccine campaigns, which can shape young people's negative attitudes toward vaccination. The last category indicated by the respondents was education on immunization. A few of them believe it can be a factor in shaping young people's attitudes and views in this regard.

Below are some excerpts from the students' statements.

– *Young people's attitudes toward vaccination are often shaped by access to reliable information and health education. Social media, which often spreads contradictory information, also plays a major role.*

– *An important factor is trust in medical institutions and personal experiences of health care in the family and neighborhood. Social pressure and public opinion also influence vaccination decisions.*

– *Young people's attitudes toward vaccination are mainly shaped by health education, the availability of reliable information, the influence of peers, and trust in the health care system and public institutions.*

– *Attitudes toward vaccination vary depending on individual experiences, family influences and media narratives. Some may be enthusiastic about vaccination, while others may be skeptical or concerned.*

The last issue raised concerned the measures that should be taken to raise awareness and form attitudes of young people toward immunization. The categories of statements are included in Table 4.

Table 4. Educational activities on immunization

| | **Response categories** | **No. of responses** |
|---|---|---|
| 1. | Information from medical authorities – meetings with young people, workshops | 24 |
| 2. | Information campaigns to promote vaccination | 12 |
| 3. | Enrich school curricula with immunization content | 10 |
| 4. | Provide young people with reliable sources of information | 7 |
| 5. | Classes in broad-based health education | 6 |
| 6. | Engaging in dialogue about vaccination with young people. | 5 |
| 7. | Exhibitions and information materials | 1 |

*Note*. Own compilation based on qualitative research performed, $n = 35$.

Most of the female students surveyed indicated that proven and reliable information on immunization provided to young people by medical authorities

is the best way to educate the public in this area. This was followed by information campaigns and supplementing school curricula with subjects related to immunization – both mandatory and optional. According to the respondents, it would also be important to identify reliable sources of information from which young people could draw proven and established knowledge. Another issue raised in the free statements concerned the implementation of classes on pro-health topics expanded to include topics related to immunizations. For some of the respondents, it was also important to be able to speak out and ask questions on the subject that bothered young people. One person pointed to organizing exhibitions or preparing information leaflets as another form of education.

Here are some excerpts from the students' statements.

– *Education at school? I, for one, have never heard of this topic or it has not come to my attention – which is a shame. Meeting a specialist would be an interesting option – or having an exhibition in the school corridor. I see the need for more education on the subject and dispelling myths. There is a need for verified information.*

– *It is important to introduce educational classes on health and vaccination in curricula, provide reliable sources of information, information campaigns and support from authorities, such as doctors.*

– *In my opinion, there is a need for meetings where people can receive specialized information on vaccination. It is also important that they have the opportunity to inquire about any issue.*

– *There should be activities in school to explain what vaccines are, what for, and why they are they important?*

*

Ways to prevent infectious diseases is a very important and relevant educational issue. One of its aspects is immunization. In recent years, this topic has been taken up and commented on by various social groups. It is important that this social dialogue and opinion formation be based on established knowledge and reliable sources of information. This also applies to undertaking educational activities in this area.

The analysis of the free statements of the student-teachers-to-be made it possible to formulate the following conclusions:

- Respondents overwhelmingly consider their knowledge of vaccination sufficient. It was not learned from school classes.

- The vast majority of the surveyed adolescents are supporters of immunization. They have no doubts about the need to follow the mandatory vaccination calendar. There is some concern about additional vaccinations due to the conflicting information present in the space (mainly in the media) regarding their effectiveness and safety.
- More education on immunization should be undertaken by:
  – organizing additional activities and meetings with medical authorities,
  – increasing health promotion education to include vaccination issues,
  – referring students to reliable sources of information on the subject,
  – conducting information campaigns in this regard, such as workshops, exhibitions, talks, discussions.

The qualitative research presented in the paper represents only a fraction of the research that can be conducted in this area. It is worth supplementing with qualitative research among students and teachers. Quantitative research on a much larger group of respondents would also be important in this regard.

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## THE ROLE OF HEALTH EDUCATION IN SHAPING YOUNG PEOPLE'S ATTITUDES TO PROTECTIVE VACCINATIONS

### SUMMARY

Infectious diseases are still an important issue for society at large. Preventing them is one of the most important educational activities. A major challenge is to skillfully conduct health education among young people, who will be responsible for the fate of the future generations. Fostering in them the awareness that the implementation of vaccinations undoubtedly has an impact on increasing the immune status of the whole society, and this is the most effective preventive form in combating many dangerous diseases. One of the conditions for the effective implementation of vaccination is professional education in this regard. This is a task facing not only health promoters but also teachers and educators. Health education should be a life-long process.

**Keywords:** vaccination; prevention; health education

## ROLA EDUKACJI ZDROWOTNEJ W KSZTAŁTOWANIU POSTAW MŁODYCH LUDZI WOBEC SZCZEPIEŃ OCHRONNYCH

### STRESZCZENIE

Choroby zakaźne to ciągle ważny problem dla całego społeczeństwa. Zapobieganie im to jedno z ważniejszych działań edukacyjnych. Dużym wyzwaniem jest umiejętne prowadzenie edukacji zdrowotnej wśród młodych ludzi, którzy odpowiedzialni będą za losy przyszłego pokolenia. Rozbudzanie w nich świadomości, że realizacja szczepień ma bez wątpienia wpływ na wzrost stanu odporności całego społeczeństwa i jest to najskuteczniejsza formą profilaktyczną w zwalczaniu wielu niebezpiecznych chorób. Jednym z warunków efektywnej realizacji szczepień, jest profesjonalna edukacja wakcynologiczna. Jest to zadanie nie tylko dla edukatorów, promotorów zdrowia, ale także nauczycieli i wychowawców. Proces edukacji zdrowotnej powinien trwać przez całe życie.

**Słowa kluczowe:** szczepienia ochronne; profilaktyka; edukacja zdrowotna