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## **Parents' opinions and sources of information on immunization in children**

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### **Summary**

Introduction and purpose of the work. By introducing new vaccines into the vaccination program, an important part of the education of the public in the prevention of infectious diseases is an important element. In order to properly distribute information about vaccination, it is necessary to know how parents and parents receive information. The purpose of the study was to learn parents' opinions and sources of information on childhood vaccination.

Material and methods. The study was conducted in 2017 from January to mid-June. 104 people, fathers and mothers were examined. The diagnostic survey method was used in this study. In the next stage of the research, the survey technique was used. The research tool used in the study was a questionnaire, which contained 40 questions and consisted of two parts.

Results. Studies have shown a significant correlation between education and sources of information on child immunization. A positive opinion about vaccination was expressed by 41.3%. A significantly lower percentage of respondents rated their vaccination as negative 3.8%. In the majority of respondents with primary / vocational education, the highest percentage of respondents rated their knowledge as low 37.5% or an average of 29.2%.

Conclusions. Despite their doubts about their effectiveness and safety, parents expressed their positive opinion about the use of immunization in children. Increase physician activation as they are the primary source of health information for parents.

**Key words:** vaccinations, children, parents, knowledge, source of information

## **Introduction**

In Poland, we are observing a fairly stable situation with regard to preventive vaccination in children. The risk of contracting specific infectious diseases covered by vaccinations is minimal. The high percentage of children vaccinated for a particular infectious disease has reduced the number of people who may be potential sources of infection and allows for a "protective cocoon" for people who can not be vaccinated. This type of protection is mainly created around newborns, infants, pregnant women [4,5]. For these groups, infectious disease can be a potential threat not only to health, but also often to life.

The World Health Organization has published the latest data showing that the number of measles cases has started to increase significantly since the beginning of 2017, also in Poland. In January there were 575 cases in Europe, including over 200 in Italy. The worst is in Romania - there were more than 3 400 cases and 17 deaths [1,2,9].

In Poland in 2010 there were 13 cases of illness,

In 2011 already 39, in 2012 - 70, in 2013 - 88. In 2014 the measles disease fell to 110 people, and from February 2016 to January 2017 140 diseases were reported. Moreover, in the case of non-vaccinated children the statistics also increased dynamically [2,9].

Vaccination has significantly contributed to reducing the burden of infectious diseases, not only in Poland but also worldwide [14]. Vaccines, like any medicinal product, can cause side effects. However, the risk of their occurrence should be compared with the risk associated with the disease, which we prevent by vaccination (risk of disease, risk of complications). In Poland, vaccinations are carried out in accordance with the applicable Vaccination Program, which is updated every year. The current version is announced in the message of Chief Sanitary Inspector [5,14]. By introducing new vaccines into the program an important element is the fair education of the public in the prevention of infectious diseases. Views and practices in early childhood education are constantly evolving similar phenomena in the health field. This change is particularly evident in the area of preventive vaccination in

children. Early childhood programs are extremely important in shaping and assisting families in the effective prevention of serious illness [14].

In public health efforts, staff support many available information and tools. However, in order to properly distribute information about vaccination, it is necessary to know how parents get information from a given range. Field data on vaccination knowledge sources is intended to allow for the correct direction of educational activities and to effectively influence the propaganda actions of anti-vaccination activists.

#### Aim of the job

The purpose of the study was to learn parents' opinions and sources of information on childhood vaccination.

#### Material and methods

The main research problem is contained in the question: What is the opinion about immunization in children and what are parents' sources of information?

The study was conducted at the "Health" Medical Center in Kielce. Both fathers and mothers took part in the study. 104 people were examined. The study was conducted in 2017 between January and mid June. The diagnostic survey method was used in this study. In the next stage of the research, the survey technique was used. The research tool used in the study was a questionnaire, which contained 40 questions and consisted of two parts.

The first part contained questions for collecting socio-demographic data (place of residence - city / village, number of children, age of each child, age of the respondents, educational level, socio-economic status), and the second questioned the parents' opinions on vaccination included in the program Vaccination, vaccination safety, vaccination information sources, and parental attitudes to the various vaccination issues.

The questionnaire included the following types of questions: half open questions, closed - alternative, disjunctive, and conjunctive questions. Prior to the test, written consent was obtained. The respondents were informed about anonymity, and participation was optional. Answers to questions about knowledge have been written as "yes", "no" and "I do not know". In order to get to know the parents' views on immunization, five points were used: "I agree," "I disagree," "I do not know," "I do not," and "I disagree".

## Results

There is a dissonance of attitudes in the search for vaccination information. Parents seek information about vaccination from several sources, quite important among them the Internet, but also the doctor. Researchers also list a nurse / clinic, family, the press, radio and television. However, the only reliable source is a physician. It seems therefore that the mechanism is as follows, basic information is obtained in various publicly accessible media, but ultimately is verified by the doctor. A large proportion of the respondents admit that universal information is sufficient to make a decision to vaccinate, despite this the doctor is a credible person. Studies have made it possible to identify sources of knowledge about vaccination. Parents most often referred to a doctor (31.8%), a nurse / clinic (16.4%) and the Internet (27%) as a source of information on artificial immunization. Media - television and the press were also important (8.6%). In the least researched people pointed out radio - 8 people (7.6%) as a source of information. The obtained results from the conducted studies are presented in the table below.

Tab.1. Sources of information about vaccination by the respondents

Sources of information	n	%
Doctor	33	31,8
The nurse / clinic	17	16,4
Internet	28	27
TV	9	8,6
Press	9	8,6
Radio	8	7,6
Together	104	100,00

Source: own elaboration

The statistics show a significant correlation between education and sources of information on immunization in children. Parents with lower primary / occupational backgrounds, most often referring to a nurse, were 22.4%, 15.5%, and 13.8%, respectively. Researchers with secondary education pointed to television 18.3%, interview with nurse and doctor - 17.1% and Internet 13.4%. Researchers with higher education indicated the Internet 17.3%, television 14.2% and interview with the doctor 13.4% as a tool for obtaining information on vaccination.

Table 2. Educate the surveyed and sources of information

n	R	Level p
104	0,202	0,040

Source: own elaboration

n-number

R-correlation coefficient

P-level of significance

The analysis of the data on children vaccinated children showed that the largest group of respondents agreed that the vaccination program in Poland contained vaccines that are mandatory and those that the parent decides independently. Of course, all the testers have confirmed 100% of their children's vaccinations. Thus they expressed a very positive opinion about vaccination 41.3% or positive 34.6%. A significantly lower percentage of respondents rated their vaccination as negative 3.8% or very negative 1.9%. These groups of parents were primarily concerned with indicating mandatory vaccinations included in the program. The living environment did not affect the knowledge of vaccination and had little influence on the sources of vaccination information. Considering the influence on self-assessment of parents' knowledge of specific factors such as their age, education, material situation or number of children it was found that only parental education was statistically significant correlated with self-assessment of vaccination ( $p < 0.05$ ). In the study group with primary / vocational education, the highest percentage rated their knowledge as low 37.5% or an average of 29.2%. In this group, 8.3% stated that they did not have any knowledge about vaccination. People with secondary education most often identified their knowledge as a mean of 44.7% and a high of 31.6%, while in the higher education group, they rated the knowledge as medium and large.

Table 3. Education and self-assessment of knowledge about vaccination

n	R	p
104	0,324	0,001

Source: own elaboration

## Discussion

Influence on the correct attitude towards vaccination in children takes part in various groups, especially those who are involved in the promotion and prevention of health every day. Among these groups we can distinguish experts and specialists in the field of infectious diseases, epidemiology, neonatology or pediatrics. Besides all public and media institutions [10].

The prerequisite for shaping correct behaviors against vaccination is the promotion by these groups of reliable and comprehensive knowledge about artificial immunization [11]. The most important role, as shown by the own research in the health education of parents in the field of immunization in children play doctors. The investigator was most often quoted as a reliable source of information. Because medical staff is most trusted with patients for knowledge acquisition, education in the medical community, especially primary care workers, seems particularly important as it may affect the number of parents refusing to vaccinate their child [14].

Inadequate physician qualifications may be a cause and an obstacle to the implementation of the vaccination program. The research conducted in the West Pomeranian Voivodship showed that the training of health care workers in infectious diseases and vaccination prevention significantly improved the incidence rate in the voivodship [6].

The availability of reliable sources of information is also very important. Despite the fact that a significant proportion of parents in their own studies have pointed out to the doctor as a reliable source of information, not everyone mentioned a doctor as the only source of information about vaccination. The situation may be due to the fact that physicians do not spend enough time providing the necessary information, and may also be due to lack of free access to physicians [1,14].

In studies conducted in America, physicians have also been identified as the most important factor influencing parents' knowledge about vaccination [8]

Studies in England show that the percentage of parents expressing opinion that poliomyelitis or pertussis has a significant impact on the child's incidence is decreasing [3.7].

Lack of knowledge about the need to prevent diseases such as measles, diphtheria or pertussis can lead to a misconception of the need to prevent them. According to research a significant proportion of parents agree to vaccination under the vaccination program. Acceptance of this method of prevention should, however, result not only from the obligation, but above all from the conviction and knowledge of the right to vaccinations.

Referring to the knowledge of the respondents, the statistical analysis showed significance at the border, with higher education showing a better level of knowledge in vaccination. People with higher education were best educated, as confirmed by research conducted by Tarczon et al. [15]. On the other hand, nationwide survey Rogalska showed that education was a factor influencing negative attitude of parents towards vaccination [10].

The biggest media source of parents' knowledge about vaccination is undoubtedly the Internet. The results obtained are consistent with the research conducted by the Cracow Center, where the respondents also emphasize the role of the Internet as a source of information [16].

It is difficult to disagree with the fact that the Internet offers access to reliable information, supported by scientific evidence as well as data that are posted by anti-vaccination. Examples of such practices are the National Association of Knowledge of Vaccination "STOP NOP" Which deals with a number of topics that contain false theses [12]. Mass media: television, the press and the radio are the means that easily and directly reach a large area of society. These media are used to promote various types of information. According to own research, respondents have often observed various types of advertising, social campaigns promoting vaccination, and also positive opinion on the media.

#### Conclusions

1. Parents, in spite of their efficacy and safety concerns, expressed a positive opinion about the use of preventive vaccines in children.
2. The most common source of information about vaccination is the physician.
3. Activation of workers and institutions of protection and promotion of health should be strengthened in order to educate parents' health.

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