Age-conditioned differences in parents’ attitudes towards compulsory vaccination

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Summary

Background. Vaccinations are the most effective tool in preventing serious infectious diseases. However, due to an increase in negative opinions on immunization, more and more parents avoid mandatory vaccinations each year.

Objectives. The aim of the study was to compare the attitude towards vaccinations of two generations of parents.

Material and methods. The study involved 140 individuals with children up to the age of 7 (78 people) and between the ages of 18–19 (62 people). It was carried out among the patients of two community health care centers, using the author’s proprietary survey.

Results. In the group of young parents having a small child, only 71% of them wanted compulsory vaccinations, as opposed to older parents, among which 94% wished to maintain continue this (p < 0.001). The reporting for child vaccinations in the determined time is a bigger issue for the young generation of parents. Statistically significant (p > 0.001), the same group, more often than the older generation, expressed opinions concerning the inefficiency of vaccines, too large amount of vaccines in the current immunization program, no need to vaccinate children and the possibility of replacing it through a healthy lifestyle and natural methods of immunization.

Conclusions. The young generation of parents increasingly ignores the recommendations for an obligatory vaccination schedule. Parents of those children who were of age were less likely to question the efficacy and sense of mandatory vaccinations. Information booklets should be given out to parents with a child reporting for vaccination.

Key words: vaccination, physician, child.

Background

Vaccinations are the most effective way to prevent serious infectious diseases. They reduce the spread of infection and prevent complications (including fatal). Systematic vaccination of individuals in society results in immunity of the entire population and, in the long term, may even lead to a total eradication of the disease, in particular an infectious disease, as in the case of smallpox [1]. Regulations on mandatory vaccinations in Poland are the result of participation in international programs of total eradication of infectious diseases (i.e. measles, rubella), which is coordinated by the World Health Organization (WHO). It also provides protection for children from dangerous infectious diseases of high mortality [2]. The effects of these actions are visible, for example, in the number of cases of measles, which has significantly decreased in Poland and still remains at a lower level than in other countries of the European Union [3]. Due to the high level of implementation of the immunization program (over 95%), Poland could serve as a model for other countries.

However, in the late 90s, disturbing changes began. Anti-vaccination movements began persuading people that there is no need for vaccinations, when the particular disease has a low morbidity rate and promoting information on side effects of the vaccines used is becoming more and more popular. Such opinions are easily available on the Internet and other media, thus strongly influencing parents, influencing them to restrain from vaccinating their children [4]. Epidemiological data in Poland from 2004–2013 clearly shows an increase in the number of unvaccinated children whose parents do not report them for compulsory vaccination [5]. And so, in 2011, there were 4,689 of of such children, a year later the number increased to 5,340 and in 2013, 7,248 children were not vaccinated because of their parents decision to abstain from compulsory vaccination.

Objectives

The aim of the study was to compare the ratio of vaccination among young parents and parents of children who have already completed a vaccination program.

Material and methods

The study group consisted of 140 parents with children. 52% of the analyzed population lived in a city with more than 100,000 inhabitants, 29% lived in a small town, and 19% in rural areas. Respondents were divided into two groups according to their child’s age. The parents whose children attended preschool and elementary school were assigned to group I (78 people in total). Parents of older children were assigned to group II (62 people at total). The study was conducted in two primary health care facilities.
The evaluation was performed with the author’s proprietary, anonymous survey. The survey questions concerned the effectiveness of the vaccines, the need for a vaccination schedule for children and the attitude of parents towards the vaccines. Parents were given the survey to fill in during a medical visit. The results were processed using the Statistica v.10 program. Variable distribution calculations were made using the Shapiro-Wilk test.

Results

The first group consisted of 78 parents (mean age 29.3 years ± 3.0), with one child under the age of 7 (mean age 4.6 years ± 5.9). The second group included 62 parents (mean age 47.6 years ± 5), with one (24%) or two children (76%). The age of children in the second group 2 ranged from 18 to 19 years (mean age amounted to 18.05 years ± 2.3), and these children underwent all mandatory vaccinations. In this group, 87% of parents declared higher education, and 13% had a high school education. There were no statistically significant differences in terms of education among the parents of the two study groups (p < 0.05).

At the beginning, the parents were asked about their opinion regarding mandatory vaccinations among children in Poland and in following deadlines of the vaccination schedule (Table 1).

The difference in parents’ opinions regarding the further presence of mandatory immunization and an immunization schedule is statistically significant. Only 71% of young parents with small children were in favor of maintaining mandatory vaccinations, in contrast to the older parents, 94% of whom are in compliance (p < 0.001).

Similar differences were observed in reporting with the child for vaccination (Table 2).

\[ \chi^2 = 10.342; p = 0.001. \]

Young parents are less likely to bring their children for vaccination on time in comparison to older parents, who in 97% of the cases followed the vaccinations schedule (p < 0.001).

The following questions concerned views on the number of vaccines in the vaccination schedule, their effectiveness, the need for vaccination when the disease does not occur or is rare and methods that may replace vaccines (Table 3).

Young parents, significantly more often than the older generation (p < 0.001), were of the opinion that vaccines are ineffective, the mandatory immunization schedule covers too many vaccines, vaccines are unnecessary when an infectious disease does not occur or is rare and that it is possible to replace vaccines with a healthy lifestyle and natural methods of immunization.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Group I</th>
<th>Group II</th>
<th>Group I vs. Group II</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, it is needed</td>
<td>55 (70.5%)</td>
<td>58 (93.5%)</td>
<td>( \chi^2 = 10.342 ); p = 0.001</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>23 (29.5%)</td>
<td>4 (6.5%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = 10.342; p = 0.001. \]

Discussion

Due to a mandatory immunization schedule, vaccinations in Poland are common and publicly available. According to the decree of the Minister of Health, the immunization schedule is modified every year in the context of new medicines and contraindications for individual vaccines [6]. Changes in the immunization schedule are dictated by the epidemiological situation in Poland and in neighboring countries, in accordance with current WHO recommendations and the financial situation of the state.

Twenty years ago, a vaccination schedule was implemented both in educational institutions and beyond. Parents of children not attending nursery school or kindergar-
to the Sanitary-Epidemiological Station, which may result in a fine imposed upon the parents. However, children covered only by private health care are, for a long time, beyond the control of the national health care system [12].

Recently, an outbreak of measles became one of the major health problems in the US and Western Europe. A significant increase in morbidity resulted in the fact that in the countries where childhood vaccinations are not mandatory but only recommended, they began to consider making immunization mandatory. This was met favorably by the public – 72% of respondents in Germany supported mandatory immunization in a television survey [13].

An educational and promotional campaign for immunization, which is the response of the Ministry of Health prevailing in Poland and the world situation, should not be the only form of combat against anti-vaccination movements. Local social initiatives and the activities of health care workers are of even greater value here.

Currently, the physician is facing a new challenge in convincing parents about the usefulness and effectiveness of vaccination. If all their doubts are not explained, they will look for answers somewhere else – most frequently on the Internet [14]. In the 1970s, vaccination was a luxury. Now, with a low incidence of infectious diseases and lack of appropriate education, regular reporting of children for vaccinations has become an unnecessary duty.

Conclusions

1. The young generation of parents is more likely to be against a compulsory vaccination schedule than the older generation.
2. Parents of adult children less frequently questioned the effectiveness of vaccinations and the reason for mandatory vaccinations than parents of preschool children.
3. In place of mandatory vaccinations, young parents would rather choose natural methods for immunization of their children.

Source of funding: This work was funded by the authors’ resources.

Conflict of interest: The authors declare no conflict of interests.

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