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The Public Attitudes, Concerns and Behaviors towards Children Vaccination

Nehad J. Ahmed[1*], Abdulrahman S. Alrawili[2] and Faisal Z. Alkhawaja[2]

[1]Department of Clinical Pharmacy, College of Pharmacy, Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia.
[2]College of Pharmacy, Prince Sattam Bin Abdulaziz University, Alkharj, Saudi Arabia.

Authors' contributions

This work was carried out in collaboration among all authors. Author NJA designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Authors ASA and FZA managed the analyses of the study and managed the literature searches. All authors read and approved the final manuscript.

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ABSTRACT

Aim: The aim of this study was to identify the public concerns, attitudes and behavior towards vaccination.
Methodology: This was a cross-sectional study that included an online survey about the public concerns, attitudes and behavior towards vaccination in Saudi Arabia. The survey was translated to Arabic language and converted to an online form using google forms and after that it was sent to be filled by the parents.
Results: About 92% of the respondents said that children should be vaccinated in order to protect them and about 86% of them believed that vaccinations are safe for children in general. Regarding the concerns about vaccination, about 69% of the respondents were concerned about the distress to children of the injection itself and 59% of them were concerned about the increasing number of vaccines recommended for children. Furthermore, about 62% of the respondents were concerned that vaccines are not tested enough for safety.
Conclusion: The majority of respondents in this study reported positive attitude but more than half of them expressed some degree of concern regarding children vaccination. Healthcare

**Corresponding author: E-mail: n.ahmed@psau.edu.sa, pharmdnehadjaser@yahoo.com;*

professionals should play an active role in clarifying these concerns about vaccination with the public. Moreover, they should communicate with parents regarding the vaccinations and provide them with a trusted information about the vaccine.

Keywords: Attitudes; behavior; concerns; parental; vaccination.

1. INTRODUCTION

Vaccines are one of the most successful tools in public health for preventing disabilities, diseases, and death [1]. Several studies showed that because vaccines have been so successful, perceived risks from vaccine-preventable diseases have diminished, whereas perceived risks of vaccination have increased [2,3]. Parental attitudes and beliefs about vaccines are an important factor in predicting the immunization status of children [4]. The success of an immunization program depends on 2 important aspects; coverage and high rates of acceptance [5].

Blendell and Fehr showed that regarding the rates of vaccination among pregnant women and children, there has been a reduction in the number of vaccinations being administered in these vulnerable populations [6]. Omer et al stated that in the United States, there is evidence of an increase in vaccine refusal and of geographic clustering of refusals that result in outbreaks [5]. Dube et al reported that vaccine hesitancy is an issue of global concern in developing and developed countries [7].

World Health Organization stated that vaccination hesitancy refers to the refusal of vaccines or the delay in vaccines acceptance despite the availability of vaccine services [8]. A national vaccine attitudes survey conducted in Australia found that the majority of parents with incompletely immunized children (70%) were concerned about the side effects of the vaccine [9]. Chow et al found that while 90% of parents agreed that vaccinations were safe for children, only 23% of them were concerned that vaccines were not tested enough for safety and 21% of them believed that vaccines could cause autism. They also stated that 22% of the parents were also concerned that their child's immune system could be weakened by vaccinations [10]. The aim of this study was to identify the public concerns, attitudes and behavior towards vaccination.

2. METHODOLOGY

This is a cross-sectional study that included an online survey about the public concerns, attitudes and behavior towards vaccination in Saudi Arabia. The survey was adapted from a previous study that was conducted in Australia [10]. The data was collected during February 2021.

The survey was translated to Arabic language and converted to an online form using google forms and after its validation it was sent to be filled by the parents. The incomplete surveys were excluded from the study. The data were non-identifiable and the participation in the study was voluntary.

The survey included 2 parts, the first part about the personal data and the second part included questions about the public concerns, attitudes and behavior towards children vaccination. The data were collected and analyzed using Excel software and represented as frequencies and percentages.

3. RESULTS AND DISCUSSION

The questionnaire was filled by 71 respondents. Most of the respondents were less than 24 years (78.87%). The majority of them were females (67.61%) and about 47.9% of them were high school students. Demographics of survey respondents are shown in Table 1.

Table 2 shows the public concerns, attitudes and behavior towards children vaccination. About 92% of the respondents said that children should be vaccinated in order to protect them and about 86% of them believed that vaccinations are safe for children in general. Most of the respondents were confident in information provided by healthcare professional (92.96%).

Regarding the concerns about vaccination, about 69% of the respondents were concerned about the distress to children of the injection itself and 59% of them were concerned about the increasing number of vaccines recommended for children. Furthermore, about 62% of the respondents were concerned that vaccines are not tested enough for safety and 54.93% of them preferred children to get natural immunity from the diseases rather than immunity from the vaccines.

Table 1. Demographics of survey respondents

Variable	Category	Number	Percentage
Age	18–24	56	78.87
	25–34	11	15.49
	More than 34	4	5.64
Gender	Male	23	32.39
	Female	48	67.61
Education level	Year 12 or below	34	47.89
	Bachelor degree	31	43.66
	Postgraduate	6	8.45

Table 2. The public concerns, attitudes and behavior towards children vaccination

Variable	Category	Number	Percentage
Children should be vaccinated in order to protect them	Agree	65	91.55
	Disagree	6	8.45
I believe that vaccinations are safe for children in general	Agree	61	85.92
	Disagree	10	14.08
I am confident in information provided by healthcare professional	Agree	66	92.96
	Disagree	5	7.04
I am satisfied with amount of information provided by healthcare professional	Agree	61	85.92
	Disagree	10	14.08
Children should be vaccinated in order to protect the wider community	Agree	64	90.14
	Disagree	7	9.86
I am concerned about the distress to children of the injection itself	Agree	49	69.01
	Disagree	22	30.99
I am concerned about the increasing number of vaccines recommended for children	Agree	42	59.15
	Disagree	29	40.85
I am concerned that vaccines are not tested enough for safety	Agree	44	61.97
	Disagree	27	38.03
I am concerned that children get too many vaccines during the first two years of life	Agree	35	49.30
	Disagree	36	50.70
I am concerned that a child's immune system could be weakened by vaccinations	Agree	35	49.30
	Disagree	36	50.70
I am concerned that vaccines can cause autism in healthy children	Agree	14	19.72
	Disagree	57	80.28
I am concerned that vaccines are given to children to prevent diseases that they are not likely to get	Agree	32	45.07
	Disagree	39	54.93
I prefer children to get natural immunity from the diseases rather than immunity from the vaccines	Agree	39	54.93
	Disagree	32	45.07
I am concerned that vaccines are given to children to prevent diseases that are not serious	Agree	30	42.25
	Disagree	41	57.75
Vaccination is not needed because others have vaccinated their children and diseases have been controlled	Agree	10	14.08
	Disagree	61	85.92

The highlighted areas could be of concern and should be looked into by the health officials as they could easily lead to apathy towards vaccines considering that the respondents were people just entering child bearing age.

Most of the respondents agreed that children should be vaccinated in order to protect them, vaccinations are safe for children in general, they are confident in information provided by healthcare professional and they are satisfied with the amount of information provided by healthcare professional. Similarly, Chow et al reported that 92% of the respondents in their study agreed that they vaccinate their child to protect him/her and 90% of them said that vaccinations are safe for children in general [10]. Moreover, Alawneh et al reported that vaccine safety was strongly agreed to most of the parents (82%) [11]. Elbur et al. stated that 73% of the

respondents in their study agreed that vaccines for child immunization are safe [12].

About 62% of the respondents in the present study were concerned that vaccines are not tested enough for safety.in contrast to what Chow et al showed that only 23% said that the vaccines safety is not tested adequately [10].

About 69% of the respondents are concerned about the distress to children of the injection itself and about 59% of them are concerned about the increasing number of vaccines recommended for children. Alawneh et al revealed that although parental confidence in vaccine safety is high, several vaccine-related concerns, such as pain from vaccine administration and the number of vaccines given at once, were common among parents of young children [11].

Only 20% of the respondents agreed that vaccines can cause autism in healthy children. Similar to that, Chow et al reported that only 21% of the parents in their study said that vaccines can cause autism [10]. The belief that vaccines lead to autism was the most prevalent parental concern in a survey conducted in USA [13]. Elbur et al stated that 70% of the respondents in their study denied that there is association between immunization and autism [12]. CDC reported that Vaccines do not cause autism [14].

About 54.93% of the respondents agreed that children should get natural immunity from the diseases rather than immunity from the vaccines. In contrast to that, Chow et al reported that only 16% of the parents said that it is better to get an immunity from the diseases naturally and not from the vaccines [10]. U.S. Department of Health & Human Services reported that vaccines are much safer than natural immunity. Natural immunity happens after you get sick with a disease. But diseases can be serious — and even deadly. A vaccine protects you from a disease before it makes you sick [15].

Healthcare workers (HCWs), especially public health professionals have an important role in informing and promoting vaccinations [16]. They should recommend vaccinations to their patients and provided recommendations to hesitant patients.

4. CONCLUSION

The majority of respondents in this study reported positive attitude but more than half of them expressed some degree of concern regarding children vaccination. Healthcare professionals should play an active role in clarifying these concerns about vaccination with the public. Moreover, they should communicate with parents regarding the vaccinations and provide them with trusted information about the vaccine.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the authors.

ETHICAL APPROVAL

The study was approved by Research Ethics Committee in Health and Science Disciplines with an Approval No REC-HSD-41-2021.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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