



Understanding Parental Perspectives on Childhood Vaccines: Examining Attitudes and Behaviors of Parents with Young Children

Ebeveynlerin Çocukluk Çağı Aşılarına Bakış Açılarını Anlamak: Küçük Çocuğu Olan Ebeveynlerin Tutum ve Davranışlarının İncelenmesi

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ABSTRACT

Aim: Vaccine hesitancy is a current and global problem. In order to increase social acceptance of vaccination, it is recommended to determine the local situation and propose solutions per cultural norms. Studies have shown that vaccine hesitancy is a steerable situation and that the bond of trust between the health worker and the parent increases vaccine acceptance. In our study, we aimed to examine the attitudes and behaviors of participating parents regarding childhood vaccines.

Material and Method: The study population was home-parents with children aged 0-24 months who agreed to participate by snowball sampling method. Participants completed the "Parental Attitudes Towards Childhood Vaccinations" scale (Bulun et al.) and sociodemographic data form online. An information form was sent to all participants, and informed consent was obtained.

Results: A total of 138 participants were reached online. Of the parents reached, 87.76% (n:86) were mothers, and 66.33% (n:65) had one child. 95.88% (n:93) of the participants reported being married. 53.61% (n:52) of the participants had completed undergraduate education. 98 questionnaires with appropriate age groups and complete answers were evaluated. The number of participants who decided not to vaccinate was 16 (16.33%), while 10 (10%) participants stated that they postponed vaccination. 73% (n: 72) of the participants thought vaccination was more effective than natural immunization. 69.38% (n: 68) of the participants reported trusting the information they received about vaccines. Again, 69.38% (n:68) of the participants reported that they could openly discuss their concerns about vaccines with healthcare professionals. 63% of the participants stated they had no hesitation about childhood vaccines. All participants reported that they would get vaccinated when they had other children. When asked about the sources of information about childhood vaccines, 92.78% (n: 90) of the participants stated that they obtained information from healthcare professionals. In comparison, 53.61% (n: 52) of the participants reported using online sources.

Conclusion: Numerous studies have highlighted that vaccine ambivalence, recognized as a major global issue, can be addressed effectively through collaborative efforts with families via non-judgemental, empathic, supportive, and tailor-made family interviews with solution-oriented approaches. Our study group observed that the concerns raised align with the literature, although epidemiological studies in our country remain limited. When attempting to find scientific solutions by comprehending the family's concerns, it is crucial to reassess the situation during each interaction and persistently pursue solutions with patience, especially regarding child health and societal impacts.

Keywords: Vaccination hesitancy, parents, vaccination, trust

ÖZ

Giriş: Aşı kararsızlığı güncel ve küresel bir sorundur. Aşılamanın toplumsal kabulünü artırmak için yerel durumun tespit edilmesi ve kültürel normlara göre çözümler önerilmesi önerilmektedir. Yapılan çalışmalar aşı kararsızlığının yönlendirilebilir bir durum olduğunu ve sağlık çalışanı ile ebeveyn arasındaki güven bağının aşı kabulünü artırdığını göstermiştir. Çalışmamızda, katılımcı ebeveynlerin çocukluk çağı aşılarına ilişkin tutum ve davranışlarını incelemeyi amaçladık.

Gereç ve Yöntem: Çalışma evreni, kartopu örnekleme yöntemiyle katılmayı kabul eden 0-24 aylık çocukları olan ev ebeveynleridir. Katılımcılar "Çocukluk Çağı Aşılarına Yönelik Ebeveyn Tutumları" ölçeğini (Bulun vd.) ve sosyodemografik veri formunu çevrimiçi olarak doldurmuştur. Tüm katılımcılara bir bilgi formu gönderilmiş ve bilgilendirilmiş onam alınmıştır.

Bulgular: Toplam 138 katılımcıya çevrimiçi olarak ulaşılmıştır. Ulaşılan ebeveynlerin %87,76'sı (n:86) annedir ve %66,33'ünün (n:65) bir çocuğu vardır. Katılımcıların %95,88'i (n:93) evli olduğunu bildirmiştir. Katılımcıların %53,61'i (n:52) lisans eğitimini tamamlamıştır. 98 anket uygun yaş grupları ve eksiksiz cevaplarla değerlendirmeye alınmıştır. Aşı yaptırmamaya karar veren katılımcı sayısı 16 (%16,33) iken, 10 (%10) katılımcı aşılamayı ertelediğini belirtmiştir. Katılımcıların %73'ü (n: 72) aşılamanın doğal bağışıklamadan daha etkili olduğunu düşünmektedir. Katılımcıların %69,38'i (n: 68) aşılar hakkında aldıkları bilgilere güvendiklerini belirtmiştir. Yine katılımcıların %69,38'i (n:68) aşılarla ilgili endişelerini sağlık çalışanlarıyla açıkça tartışabildiklerini bildirmiştir. Katılımcıların %63'ü çocukluk çağı aşıları konusunda herhangi bir tereddüt yaşamadığını belirtmiştir. Katılımcıların tamamı başka çocukları olduğunda aşı yaptıracaklarını bildirmiştir. Çocukluk çağı aşılarıyla ilgili bilgi kaynakları sorulduğunda, katılımcıların %92,78'i (n: 90) sağlık çalışanlarından bilgi aldıklarını belirtmiştir. Buna karşılık, katılımcıların %53,61'i (n: 52) çevrimiçi kaynakları kullandığını bildirmiştir.

Sonuç: Çok sayıda çalışma, önemli bir küresel sorun olarak kabul edilen aşı kararsızlığının, yargılayıcı olmayan, empatik, destekleyici ve çözüm odaklı yaklaşımlarla kişiye özel aile görüşmeleri yoluyla ailelerle işbirliği çabalarıyla etkili bir şekilde ele alınabileceğini vurgulamıştır. Çalışma grubumuz, ülkemizdeki epidemiyolojik çalışmaların sınırlı olmasına rağmen, dile getirilen endişelerin literatürle uyumlu olduğunu gözlemlemiştir. Ailenin kaygılarını anlayarak bilimsel çözümler bulmaya çalışırken, her etkileşim sırasında durumu yeniden değerlendirmek ve özellikle çocuk sağlığı ve toplumsal etkiler konusunda sabırla çözüm arayışını sürdürmek çok önemlidir.

Anahtar Kelimeler: Aşı kararsızlığı, ebeveynler, aşılama, güven

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Başvuru Tarihi/Received: 29.12.2023

Kabul Tarihi/Accepted: 18.02.2024



INTRODUCTION

Vaccine hesitancy presents a worldwide concern that poses a risk to public health (1,2). The causes of vaccine hesitancy can be intricate and varied, encompassing misinformation, skepticism, cultural beliefs, social media influence, and lack of trust. It is essential to recognize the local situation and establish solutions in line with cultural norms to diminish vaccine hesitancy and heighten social acceptance of vaccines (1,3,4). Examining the attitudes and behaviors of parents towards childhood vaccines constitutes a crucial research area. Some parents harbor worries about the safety of childhood vaccines, presenting a significant hurdle to vaccine acceptance that jeopardizes public health (5,6). Thus, investigating parents' attitudes and behaviors surrounding childhood vaccines is vital to reducing vaccine ambivalence (5,6). Studies indicate that the degree of communication and trust between parents and healthcare professionals plays a vital role in shaping vaccine hesitancy. Parents expect healthcare professionals to offer dependable information about vaccines, which impacts their decision-making process (2,7,8).

Moreover, healthcare professionals' empathy towards parents' apprehensions and perceptions may reduce vaccine hesitancy. Improving healthcare professionals' skills to communicate effectively with parents is crucial. Sources of vaccine information for parents could also affect vaccine hesitancy (9,10). A considerable number of parents utilize online resources for reliable information on vaccines (6,10).

Nevertheless, apprehensions over the dependability of these sources still need to be made. Healthcare professionals have a crucial role in providing parents with trusted sources of vaccine information and facilitating access to such information (9,10). Concurrently, parental awareness of vaccination is key to mitigating vaccine hesitancy. Insufficient knowledge among many parents about vaccines' advantages, side effects, and disease prevention capabilities further compounds the issue (9,11,12). Providing precise and objective information to parents about vaccines is crucial in raising their awareness levels (9,10). Healthcare professionals should provide comprehensive information about vaccines to parents and address their concerns (10,13). The study aims to evaluate parents' perspectives and conduct relating to vaccinating their children, to define the local vaccine hesitancy situation, and lay the groundwork for devising solution strategies that are by cultural norms for enhancing families' acceptance of vaccination.

MATERIAL AND METHOD

Study Design

This research utilized a cross-sectional study design to investigate parental attitudes toward childhood vaccinations among parents of children aged 0-24 months.

Study Population

The study participants encompassed parents who had children within the designated age bracket and consented to participate in the research. The snowball sampling approach was adopted to recruit participants, whereby the initially enrolled parents were requested to refer other potential participants from their social circles.

Data Collection Instruments

Opel et al. (2011) (14,15) developed the Parent Attitudes About Childhood Vaccines survey, adapted for Turkish use and subjected to a validity and reliability study by Bulun et al. (2020) (16). The Parent Attitudes About Childhood Vaccines scale measures parents' attitudes towards childhood vaccinations using 23 items. The participants also completed a sociodemographic data form to provide demographic information.

Data Collection

The data was collected online, with informed consent obtained from participants who received an information form explaining the study's purpose and guaranteeing anonymity and confidentiality. Online survey software was used to administer the "Parent Attitudes About Childhood Vaccines Survey" and the sociodemographic data form.

Ethical Considerations

Prior to the commencement of the study, ethical approval was obtained from the ethics committee of Istanbul Medipol University. The approval, with the reference number 262, was granted on 17.03.2022. This ensured that the research complied with ethical guidelines and protected the rights and well-being of the participants.

Data Analysis

The participants' sociodemographic characteristics were summarised using descriptive statistics, including percentages and frequencies. The "Parent Attitudes About Childhood Vaccines Survey" responses were analyzed using descriptive statistical methods in a question-and-answer format rather than scoring. Thus, the responses were meticulously scrutinized, emphasizing the specifics outlined in the parent's replies.



RESULTS

A total of 138 parents were contacted using an online survey. Twelve parents declined to participate in the research. Analysis of participant sociodemographic data revealed that the majority of participants, 87.76% (n:86), were mothers, whereas fathers comprised 11.22% (n:12) of the sample. Of the participants, 95.88% (n:93) were married, and 4.12% (n:4) were single. One participant did not disclose their marital status (**Table 1**). In terms of the number of children, 65 participants (66.33%) had one child, 25 participants (25.51%) had two children, 6 participants (6.12%) had three children, and 2 participants (2.04%) had four or more children. With regards to the participants' educational backgrounds, 32.99% (n:32) had completed postgraduate education, 53.61% (n:52) had attained a bachelor's degree, 8.25% (n:8) held an associate degree, and 5.15% (n:5) had completed high school education. The income status of participants was defined as follows: 34.02% (n:33) reported 'my income is more than my expenses', 54.64% (n:53) reported 'my income is equal to my expenses', and 11.34% (n:11) reported 'my income is less than my expenses.' When the age range of the children was examined, 58 participants (59.18%) were aged between 0 and 24 months, and 40 participants (40.82%) were aged over two years (**Table 1**). Forty children of the participants were excluded from the study for being over two years of age, and 58 questionnaires were evaluated.

Table 1. Sociodemographic data of the participants		
Features	n	Percentage (%)
Relationship with the Child		
Mother	86	87.76
Father	11	11.22
Other	1	1.02
Marital Status		
Married	93	95.88
Single	4	4.12
Level of Education		
High School	5	5.15
Pre-license	8	8.25
License	52	53.61
Postgraduate	32	32.99
Income Status		
My income is less than my expenses	11	11.34
My income is equal to my expenses	53	54.64
My income is more than my expenses	33	34.02
Number of Children		
One	65	66.33
Two	25	25.51
Three	6	6.12
Four or more	2	2.04

Sixteen participants (16.33%) opted not to receive vaccination for reasons other than allergies or medical conditions, and 10 (10%) postponed vaccination. Approximately 19.39% (n:19) of participants believed that children receive more vaccinations than necessary, while 51.02% (n:50) believed that the administered vaccines were necessary. Additionally, 29.59% (n:29) expressed indecision on this matter. 81.61% (n=79) of the respondents reported that they regarded the diseases prevented by vaccination as severe, 9.18% (n=9) were uncertain, and 10.20% (n=10) did not consider the diseases prevented by vaccination as serious illnesses. Regarding the effectiveness of vaccination vs. natural immunization, 73% (n=72) of the participants believed vaccination was more effective, while 12.24% (n=12) remained unsure. 18.34% (n: 18) of respondents believed that administering vaccinations simultaneously was more effective, while 46.94% (n: 46) disagreed, and 34.69% (n: 34) remained undecided. Furthermore, 32.65% (n:32) expressed confidence that their child would not experience adverse effects following vaccination, whereas 57.14% (n:56) expressed concerns about potential negative outcomes. 51.02% (n=50) of respondents expressed confidence in the safety of childhood vaccines, while 36.73% (n=36) held reservations and 12.24% (n=12) were unsure. Concerns about the vaccine's efficacy in disease prevention were voiced by 23.47% (n=23) of participants, while 56.13% (n=55) reported no such reservations and 20.41% (n=20) were undecided. 79.59% (n:78) of the participants indicated they would vaccinate their children when they had other offspring, while 7.14% (n:7) were undecided. Concerning trust in vaccine information, 69.38% (n:68) of the participants reported they trusted the information they received. Meanwhile, 21.43% (n:21) remained undecided, and 9.18% (n:9) did not trust the information they received. Additionally, 68 participants (69.38%) responded that they could openly discuss their vaccination concerns with healthcare professionals. 63% of respondents reported no hesitancy towards childhood vaccinations. Of those asked about the sources of information for childhood vaccinations, 92.78% (n: 90) stated healthcare professionals as their primary source, while 53.61% (n: 52) also reported using online sources. 38.14% (n=37) of participants used social media platforms, including Facebook, Twitter, and Instagram, for information gathering. Additionally, 41.23% (n=40) used printed materials such as books, magazines, and newspapers. Furthermore, 31.96% (n=35) reported seeking information from individuals in their immediate surroundings (**Table 2**).

Table 2. Question and Answer		
	n	Percentage (%)
In the past, have you put off having your child vaccinated without any allergy or illness concerns?		
Yes	10	10.20
No	87	88.78
I don't know	1	1.02
In the past, have you ever decided not to vaccinate your child without any allergy or illness concerns?		
Yes	16	16.33
No	80	81.63
I don't know	2	2.04
Children get more vaccinations than is good for them.		
Strongly disagree	20	20.41
Disagree	30	30.61
I am not sure	29	29.59
I agree	16	16.33
Absolutely agree	3	3.06
I believe that most of the diseases prevented by vaccines are serious diseases.		
Strongly disagree	6	6.12
Disagree	4	4.08
I am not sure	9	9.18
I agree	31	31.63
Absolutely agree	48	48.98
It is better for my child to be immunized by getting sick than by vaccination.		
Strongly disagree	29	29.59
Disagree	43	43.88
I am not sure	12	12.24
I agree	9	9.18
Absolutely agree	5	5.10
It is also better for children to receive fewer vaccinations.		
Strongly disagree	18	18.37
Disagree	28	28.57
I am not sure	34	34.69
I agree	16	16.33
Absolutely agree	2	2.04
How worried are you that your child may suffer a serious side effect after vaccination?		
I am not worried at all	7	7.4
I am not worried	25	25.51
I am not sure	10	10.20
I am a little worried	46	46.94
I am very worried	10	10.20
How concerned are you that childhood vaccinations may not be safe?		
I am not worried at all	14	14.29
I am not worried	36	36.73
I am not sure	12	12.24
I am a little worried	30	30.61
I am very worried	6	6.12
How worried are you that the vaccine will not prevent the disease?		
I am not worried at all	15	15.31
I am not worried	40	40.82
I am not sure	20	20.41
I am a little worried	21	21.43
I am very worried	2	2.04

Table 2. Question and Answer (continued)		
	n	Percentage (%)
If you had another child today, would you want them to get all the recommended vaccinations?		
Yes	78	79.59
No	13	13.27
I don't know	7	7.14
In general, how hesitant would you be about childhood vaccinations?		
I am not worried at all	26	26.53
I am not worried	36	36.73
I am not sure	9	9.18
I am a little worried	24	24.49
I am very worried	3	3.06
I trust the information I have received about vaccinations.		
Strongly disagree	2	2.04
Disagree	7	7.14
I am not sure	21	21.43
I agree	47	47.96
Absolutely agree	21	21.43
I can openly discuss any concerns I have about vaccination with my child's doctor or other health professionals		
Strongly disagree	1	1.02
Disagree	18	18.37
I am not sure	11	11.22
I agree	50	51.02
Absolutely agree	18	18.37
What are the sources you get information about vaccines? (More than one option can be selected)		
Health professionals (physicians, nurses, pharmacists and others)	90	92.78
Near Environment	31	31.96
Web sites	52	53.61
Social media (Facebook, Tweeter, Instagram etc.)	37	38.14
Book/Magazine	35	31.96
Newspaper	5	5.15

DISCUSSION

This study's findings offer valuable insights into the attitudes and beliefs of participants concerning childhood vaccinations. In general, most participants exhibited a favorable perspective on the significance and requirement of vaccinations in ensuring public health. This corresponds to preceding studies that emphasize vaccination effectiveness in averting serious diseases (5,13). The substantial number of respondents who acknowledged the preventive advantages of vaccines is a positive sign, as it suggests an overall appreciation of immunization's role in promoting children's health.

Nevertheless, it is noteworthy that a subset of participants raised apprehensions regarding vaccine safety and efficacy. Specifically, these concerns concentrated on potential severe side effects in children and the belief that immunization is ineffective in preventing illnesses. The results demonstrate vaccine hesitancy and the



impact of false information or misunderstandings related to vaccines. Accurate information is essential to enable well-informed decisions regarding childhood vaccinations (4,5,9).

A significant observation is that some participants believe vaccines are overused. This belief may originate from a need to comprehend the recommended vaccination schedules and their reasoning. Clear communication and education are necessary to clarify the importance of adhering to vaccination schedules and dispel misconceptions about excessive vaccination (17).

The most reliable source of vaccine information came from healthcare professionals during the participants' examinations. This highlights healthcare providers' crucial role in addressing parental concerns, providing accurate information, and promoting vaccine acceptance. Effective communication and providing evidence-based information by healthcare professionals are crucial to counteracting vaccine hesitancy among parents. Active listening to parental concerns is also essential (10,13,18).

The study found that online sources and social media platforms were preferred to gather information about vaccines. This underscores the growing impact of digital platforms on people's health-related choices. However, it is essential to exercise caution regarding the reliability and accuracy of online information, as misinformation can readily proliferate on these channels. Measures should be taken to secure dependable web resources that provide evidence-based vaccine insights.

Limitations

It is crucial to recognize that this study has several limitations. Firstly, utilizing the snowball sampling technique may introduce selection bias, as participants were recruited based on referrals from existing ones. Furthermore, the study relied on self-report measures, which may be subject to social desirability bias. Additionally, the findings of this research are restricted to the specific population of home parents with children aged 0-24 months and may not apply to other populations.

CONCLUSION

The study found that most participants held favorable views toward childhood vaccinations, acknowledging their significance and preventive advantages. Nevertheless, several participants disagreed on vaccine safety, efficacy, and overuse. False beliefs were also identified as a concern. Health professionals were identified as the most trustworthy source of information, underscoring their responsibilities in addressing parental concerns and presenting precise information. The impact of online sources and social media

reinforces the necessity of accessible and dependable digital resources to combat the spread of misleading information. Efforts must improve communication strategies, enhance public health education, and foster informed decision-making to promote vaccination acceptance and safeguard public health. It is crucial to ensure a logical progression between the suggestions and explain abbreviated technical terms when first utilized.

Additionally, using clear and objective language with passive tones and avoiding biased or ornamental language is vital. A consistent citation style, footnote formatting, and a formal register must be followed while avoiding grammatical and punctuation errors. Lastly, the vocabulary should be precise, and hedging should be used to maintain a balanced and objective perspective.

ETHICAL DECLARATIONS

Ethics Committee Approval: Approval from the Istanbul Medipol University Ethics Committee (Date: 17.03.2022, Decision No: 262).

Informed Consent: Informed consent form was signed by all participants.

Referee Evaluation Process: Externally peer-reviewed.

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

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

Author Contributions: All of the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

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