

Evaluation of antivaccination movement in Turkey: qualitative reports of family physicians

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Abstract

Background: In Turkey, childhood vaccination rates are decreasing in the context of increasingly visible antivaccination movements.

Aims: To evaluate the antivaccination movement based on communication experiences between family physicians and antivaccine parents in Turkey.

Methods: We conducted 39 face-to-face in-depth interviews with family physicians in Sakarya Province who had experiences of communicating with antivaccine parents during October–December 2019. With the permission of the participants, audio recording was obtained in all interviews except one; these were transcribed verbatim and checked. A thematic approach was used to analyse the data.

Results: The most common concern about vaccination was the possible side-effects, followed by the origin of the vaccines, religious concerns and distrust of vaccines. The physicians said they assumed an inquisitive, informative and anxiety-relieving attitude towards antivaccine parents.

They said they were able to persuade most parents to vaccinate their children and that highly educated parents or those whose attitudes and behaviours were strongly influenced by their religious leaders were the hardest to convince. Physicians emphasized the importance of trust in increasing vaccine acceptance and noted the need to educate religious leaders and families to introduce mandatory vaccination policies.

Conclusion: Parents had various reasons for refusing childhood vaccinations, however, the family physicians used persuasive methods to convince them to accept the vaccinations. Strengthening the communication and persuasive skills of health care professionals regarding vaccination may help increase acceptance of childhood vaccinations.

Keywords: antivaccination, family physicians, parents, vaccine, Turkey

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Introduction

Vaccination is the most effective, dependable and cost-effective method of protecting human health, preventing infectious diseases and related serious complications. Immunization against diseases through effective and safe vaccination is the right of every child (1).

Immunization studies date back to the 18th century, and there have been as many rejecters as acceptors (2). Although childhood vaccination rates are high in Turkey, the antivaccination movement has been increasing day by day (3).

Turkey is a multicultural, developing country with a well-functioning primary health care system. Childhood vaccinations are provided by family physicians working in primary health care centres (4,5).

The reasons for antivaccination can vary from society to society. It is therefore important to understand these reasons and develop suggestions for solutions. This study aims to evaluate the experiences of family physicians

with antivaccine parents and provide fundamental data on antivaccination in Turkey.

Methods

Research design

The phenomenological method explains the meaning of experience about a concept or phenomenon for a few individuals. It is aimed at understanding a phenomenon or event and defining the essence of experiences by investigating the meaning of the experiences of individuals about an event. Phenomenology is used for studies that aim to investigate the phenomena that we frequently encounter daily, which are not foreign to us but that we cannot grasp the full meaning of, and, therefore, provide suitable reasons for research (6).

Amedeo Giorgi developed the descriptive phenomenological method with extensive phenomenological analysis in the early 1970s (7). Giorgi's descriptive

5-step phenomenological method is widely used in the fields of social and human sciences. However, Colaizzi contributed to the development of the method and it is mostly used in the health sciences. In our study, data analysis was performed using Colaizzi's descriptive phenomenological method; this 7-step analysis process provides a concise and comprehensive description of the phenomenon under study, endorsed by the participants who experienced it (8).

Colaizzi's phenomenological method was used to qualitatively analyse the communication experiences of family physicians, who are responsible for administering childhood vaccines, with antivaccine parents. The method focuses on the experiences and feelings of participants and finds shared patterns rather than individual characteristics in the research subjects.

Study subjects

Using a purposeful sampling method, we selected 39 (20 male, 19 female) family physicians working in Sakarya province between October and December 2019. The inclusion criteria were: having experience of communicating with antivaccine parents and willingness to participate in the study; there were no refusals to participate. We determined the number of required respondents by interviewing family physicians who met the inclusion criteria until the data were saturated and no new topics were generated.

Interview outline

After the relevant literature was reviewed, a semi-structured questionnaire was developed using expert opinions, and tested. Details of age, sex, marital status and years of work experience were obtained at the start of the interview.

We posed 4 main interview questions to the participants 1.

- Could you tell us what happened between you and the antivaccine parents 2.
- Could you tell us what happened between you and the antivaccine parents you persuaded 3.
- Which factors do you think play a role in increasing antivaccination campaigns 4.
- What would you recommend that your peers pay attention to while communicating with antivaccination parents?

Data collection

The purpose and significance of the research was explained to the participants in advance and a suitable meeting time was planned. The interviews were conducted in private rooms without interruptions. Researchers used techniques such as unconditional acceptance, active listening, and clarification to promote the authenticity of the data and to avoid bias. With the permission of the participants, audio recordings were obtained in all inter-

views except one. The statements of the participant who did not allow audio recording were documented word for word during the interview. Each interview took 40–50 minutes. The audio recordings were transcribed verbatim by researchers within 48 hours of the interviews and reviewed for accuracy. During data analysis, all researchers agreed with the results and selected the highlighted quotations.

Data analysis

Within 48 hours of each interview, the recording was transcribed and analysed using Colaizzi's phenomenological analysis method. Colaizzi's analysis is divided into 7 stages (8) 1.

- Every transcript was read several times and significant points were underlined by researchers 2.
- All the significant statements directly associated with the family physicians' experiences of communicating with antivaccine parents were determined 3.
- Meanings were developed from significant statements 4.
- Meanings were divided into groups and classified and then further divided into themes and subthemes 5.
- Themes and subthemes were integrated in a way to comprehensively explain the experiences of family physicians 6.
- The essential structures of the communication experiences of family physicians were described 7.
- The communication experiences of the family physicians and the findings were compared again.

Ethical approval

Ethical approval for this research was granted by the ethics committee of Sakarya University Medical Faculty (approval date: 3 May 2019).

Results

Participants and analysis

We enrolled 20 male and 19 female family physicians, aged 28–59 years, with a mean age of 41.59 [standard deviation (SD) 8.56] years (Table 1). Work experience ranged from 4 to 35 years with a mean of 17.00 (SD 8.66) years. Four participants were unmarried, 3 were married without children and 32 were married with children.

We explored the communication experiences of family physicians with antivaccine parents using phenomenological methods. Five themes emerged from analysis of the interviews. These themes and exemplar quotes are displayed in Table 2.

Table 1 Characteristics of participants (n = 39), Sakarya Province, 2019

Characteristic	Mean	SD
Age (years)	41.59	8.56
Duration of practice (years)	17.00	8.66
	No.	%
Sex		
Male	20	51.3
Female	19	48.7
Marital status		
Single	4	10.3
Married, without children	6	15.4
Married, with children	29	74.3

SD = standard deviation

Theme 1: Reasons parents do not want to vaccinate their children

Family physicians said the primary reason for antivaccination was the possible side-effects of vaccines. They said parents generally had serious concerns about the vaccines causing autism and other disease conditions, including infertility.

There was distrust towards vaccines mainly because the vaccines were imported, sometimes from countries that have poor foreign relations with Turkey. Some parents had concerns because their Islamic religious beliefs, they suspect that imported vaccines may have been made with pig products, which against their religious beliefs.

Theme 2: Family physicians' attitudes towards parents

Family physicians were careful not to be judgmental towards antivaccine parents. They mostly listen thoroughly and learn about the reasons for not agreeing to vaccinations, then inform the parents about vaccinations and what can occur if their children are not vaccinated. In addition, family physicians with longer professional experience said sharing their professional experience helped persuade some parents.

Theme 3: Factors affecting persuading parents to vaccinate

Family physicians did not force antivaccination parents to vaccinate but they tried to convince them and were highly successful in persuasion. The principal factors in this success were the mutual trust environment established between the doctor and the patient, good communication, and the sharing of scientific data with parents. The most salient characteristics of parents who were unconvinced were having a high level of education, having searched the subject online before the visit and being under the influence of a leader of their religious community.

Theme 4: Factors responsible for increasing anti-vaccine perceptions among parents

Family physicians blamed social media the most for the increase in antivaccination perceptions. The rapid spread of vaccine misinformation through social media, and the lack of correct information, were mentioned as the key factors in the spread of antivaccine beliefs. In addition, the influence of antivaccination religious leaders and medical doctors was substantial.

Table 2 Themes identified through interviews with family physicians in regard to opposition to vaccination, Sakarya province, 2019

Theme 1: Reasons parents do not want to vaccinate their children	
Subtheme	Quotations
Side-effects	<p>“They are afraid of the side-effects of vaccines. Everyone can now learn on the internet the contents and adjuvants used in vaccines and their effects. Unfortunately, the information they obtain on the internet is making parents pessimistic about the possible side-effects of vaccines. As far as I have observed, the most important reason for vaccine rejection is possible side-effects...” (female, 42 years, physician 18 years)</p> <p>“Parents strongly believe that vaccines cause infertility. They talk about autism often. There are even those who believe that vaccines make children retarded.” (female, 48 years, physician 23 years)</p>
Insecurity	<p>“... There were parents who said they did not want to give anything artificial to their children. They did not accept vitamin D and iron supplements. They said that they never trust an unnatural product. They argued that God created us this way and that we do not need artificial things.” (female, 33 years, physician 10 years)</p> <p>“I think the most common reason is that the vaccines are imported from foreign countries, so their contents are not trusted.” (female, 52 years, physician 28 years)</p> <p>“There are those who believe that vaccines are imposed on us from other countries as biological weapons.” (female, 36 years, physician 11 years)</p>
Religious sensibilities	<p>“There were those who did not want to be vaccinated because of their religious beliefs. They refused to be vaccinated on the grounds that there were some products prohibited by God in the vaccines.” (male, 54 years, physician of 30 years)</p> <p>“... They said that there are religiously frowned-upon animal ingredients in the content of vaccines.” (female, 36 years, physician 11 years)</p> <p>“... They refused, saying it contained things derived from pigs, because of their beliefs.” (female, 43 years, physician 19 years)</p>

Table 2 Themes identified through interviews with family physicians regarding opposition to vaccination, Sakarya Province, 2019 (concluded)

Theme 2: Family physicians' attitudes towards parents	
Subtheme	Quotations
Inquisitive and informative attitude towards the cause	<p>"First, I tried not to judge them. After listening to them and learning their reservations, I explain the risks of not getting vaccinated and what they might face. I try to explain it with scientific data, but I never force it." (male, 42 years, physician 16 years)</p> <p>"I try to make them feel that I respect their decisions, but I also question why they do not want to have it done. Afterwards, I try to explain the data of our Ministry of Health or the World Health Organization as much as possible. I even provide some reliable and up-to-date resources that they can read. I try to make sure they get as much accurate information as possible." (male, 28 years, physician 4 years)</p>
Sharing experience to relieve anxiety	<p>"In order to relieve them, I talk about my professional experiences, I state that I have not encountered any negativity in the people I have vaccinated in my professional life. I express that I have been practising medicine for many years and the young people whom I vaccinated as a child, who I still follow as their family physicians, do not have any health problems." (female, 48 years, physician 23 years)</p> <p>"I give examples from my own environment; I state that I have my own children fully immunized. I share my experiences in vaccination." (female, 43 years, physician of 19 years)</p>
Theme 3: Factors affecting persuading parents to vaccinate	
Subtheme	Quotations
Reasons for persuasion	<p>"Two factors made my job easier. First, I provided antivaccinationist parents with relevant literature and asked them to definitely read it. Second, I have been working in the same place for a long time and I have gained the trust of my patients." (male, 41 years, physician 18 years)</p> <p>"The most prominent issue is sincerity. Good communication with patients. It was also effective when I explained the diseases that can develop in patients who are not vaccinated and sometimes show photo examples. Frankly, I convinced by scaring them." (male, 59 years, physician 35 years)</p> <p>"Sufficient information exchange between the patient and the physician, the establishment of an atmosphere of mutual trust and being able to transfer my experiences made my job easier." (male, 55 years, physician 30 years)</p> <p>"My patients know and trust me for many years, we have a good communication ..." (male, 41 years, physician 18 years)</p>
Reasons for not being convinced	<p>"You can persuade uneducated people much more easily. In the family where I had the hardest time and could not convince, the parents were academics." (female, 42 years, physician 18 years)</p> <p>It is more difficult to convince those with a high level of education and those who ask everything on Google. Most of the time they are not convinced anyway." (female, 40 years, physician 15 years)</p> <p>"The group I find most difficult is the members of a sect. Regardless of their level of education, they do not go beyond what the cult leader said. If he said not to be vaccinated, they would not." (male, 54 years, physician 31 years)</p>
Theme 4: Factors increasing antivaccine views	
Subtheme	Quotations
Social media	<p>"I think the biggest factor is misdirection in social media." (female, 28 years, physician 3 years)</p> <p>"We can say information pollution, and social media, which enables this information to spread very quickly, of course."</p> <p>"Social media is the biggest challenge we have to overcome." (female, 39 years, physician 13 years)</p>
Antivaccine religious leaders	<p>"... We hear some sect or congregation leaders say explicitly that they should not be vaccinated." (male, 55 years, physician 30 years)</p> <p>"... It is understood that these people are acting on the words of the cult leaders." (male, 54 years, physician 31 years)</p>
Antivaccine physicians	<p>"... There are antivaccine doctors. I think paediatricians who are against vaccination are the most dangerous group..." (female, 48 years, physician 23 years)</p> <p>"... There are antivaccine medical professors..." (female, 43 years, physician 19 years)</p>
Theme 5: Preventing the increase in vaccine resistance	
Subtheme	Quotations
Education	<p>"Education should be at the forefront. It can even be given on TV programmes. Institutions related to religious affairs can provide information about vaccinations. Collective training can be given to parents of children in schools." (female, 33 years, physician 10 years)</p> <p>"Social media is very effective. Educational videos can be shared on social media platforms by the relevant institutions. Religious leaders can be educated." (female, 53 years, physician 30 years)</p> <p>"Everyone who is antivaccine and can influence large masses should be educated about it ..." (male, 54 years, physician 31 years)</p>
Effective use of media	<p>"Since social media is one of the most effective factors in the spread of antivaccination, it is necessary to ensure people can reach the right information on social media." (female, 36 years, physician 11 years)</p> <p>"I think the media will be very effective. Public spots should be prepared in all kinds of media channels..." (female, 48 years, physician 23 years)</p>
Punishment	<p>"... Anyone who opposes vaccines without scientific basis and misleads people should be punished..." (male, 37 years, physician 13 years)</p> <p>"Legal sanctions or obligations should be imposed, both against antivaccinationists and those who encourage them." (male, 41 years, physician 18 years)</p>

Theme 5: Combating vaccine resistance

Family physicians emphasized that education is at the forefront in combating antivaccination in addition to making accurate information about vaccines available to the public. The majority of them recommended criminal sanctions against people who discourage others from taking vaccines.

Discussion

Antivaccination is a growing problem. Although the reasons given for vaccine hesitancy may differ with the characteristics of a particular community, there are common reasons all over the world. In Turkey, family physicians working in primary care are responsible for childhood vaccinations. This study assessed antivaccination in Turkey from different angles based on communication by family physicians with antivaccination parents.

The most important reasons recorded by the study is the concern about vaccine side-effects. Antivaccination respondents said they do not trust the safety of vaccines or think that vaccines are religiously unsuitable (9). Among the side-effects, fear of autism was predominant. Anxiety created by a fraudulent study on the relationship between the measles, mumps and rubella (MMR) vaccine and autism, which has been revoked, continues to increase worldwide (4). Family physicians said that infertility, an increasing health concern, was associated with vaccination by the parents. Around 98% of Turkish citizens are Muslim, raising concerns about the possibility of vaccines containing pig-related materials.

In the literature, the prejudiced attitude of physicians has been associated with poor relationships with patients (10). However, family physicians in our study said their attitude to patients was free of prejudice, enabling healthy communication, which allowed them to persuasively provide necessary medical information about vaccines to patients using appropriate language even when they had negative perceptions. They also shared personal experiences regarding the concerns of the families.

It is important for physicians to not only solve the health problems of patients but also have good personal communication. Good patient–physician communication increases patient satisfaction and trust (12). The feeling of trust in the physician facilitates the acceptance of medical treatments (13). Besides this, obtaining complete knowledge about vaccines from a physician is associated with increased vaccine acceptance (14). Physicians who had established good communication and a trusting

relationship with their patients, obtained positive results after explaining medical information using appropriate language. However, it should be noted that patient–physician communication and trust did not change the negative attitudes of some parents who were influenced by religious leaders or who had higher education levels.

It has been observed that the philosophical group or individuals who advocate vaccination opposition actively use mostly social media tools effectively (15) and it has been determined that more than half of adults prefer websites that contain unscientific and unfounded news about vaccines (16). The most effective and reliable factor in vaccination decisions among individuals is the health professional (17). Therefore, the existence of antivaccine physicians as noted by our participants constitutes an important obstacle to vaccine acceptance just as social media posts by religious and other independent groups can influence the decision of families towards antivaccination.

Previous research indicates that with the increase in knowledge on vaccination the rate of vaccine acceptance among health care workers increased (17). As our participants stated, it is thought that the education of the antivaccine group or individuals is an important step towards promoting vaccination, including the use of media tools. It has also been noted that mandatory vaccination policies can be applied in cases where the target cannot be achieved through voluntary processes (18). However, there are physicians who think that the only solution is obligation and criminal sanctions.

Conclusion

This study provides an insight into antivaccination movements, family physicians' experiences of communication with antivaccine parents and recommendations regarding vaccination in Turkey. Being well-informed and being patient to understand the causes of antivaccine sentiments, as well as building trust, are very important in counseling parents. In the fight against vaccination refusal, everyone should be evaluated individually, and different approaches should be used according to their personal characteristics. While developing strategies for antivaccination policies, it is important to include interventions that will help build the capacity of health care professionals to increase vaccine acceptance among their patients.

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Évaluation des mouvements anti-vaccination en Turquie : rapports qualitatifs des médecins de famille

Résumé

Contexte : En Turquie, les taux de vaccination des enfants diminuent dans un contexte de mouvements anti-vaccination de plus en plus visibles.

Objectifs : Évaluer le mouvement anti-vaccination à partir des enseignements tirés par des médecins de famille lors de la communication avec les parents opposés à la vaccination en Turquie.

Méthodes : Nous avons mené 39 entretiens approfondis en face à face avec des médecins de famille de la province de Sakarya qui ont eu des échanges avec des parents opposés à la vaccination d'octobre à décembre 2019. Avec l'autorisation des participants, des enregistrements audio ont été obtenus dans tous les entretiens sauf un ; ceux-ci ont été transcrits mot à mot et vérifiés. Une approche thématique a été utilisée pour analyser les données.

Résultats : Les effets secondaires possibles constituaient la préoccupation la plus courante concernant la vaccination, suivis par l'origine des vaccins, les motivations d'ordre religieuses et la méfiance à l'égard des vaccins. Les médecins ont déclaré avoir adopté une attitude empreinte de curiosité, informative et apaisante à l'égard des parents opposés à la vaccination. Ils ont ajouté qu'ils ont pu persuader la plupart des parents de vacciner leurs enfants ; cependant, les parents très instruits ou ceux dont les attitudes et les comportements sont fortement influencés par les chefs religieux étaient les plus difficiles à convaincre. Les médecins ont souligné l'importance de la confiance pour accroître l'acceptation du vaccin, et indiqué le besoin d'éduquer les chefs religieux et les familles pour qu'ils introduisent des politiques de vaccination obligatoire.

Conclusion : Les parents avaient diverses raisons de refuser la vaccination des enfants, mais les médecins de famille utilisaient des moyens de persuasion pour qu'ils acceptent la vaccination. Renforcer la communication et les talents de persuasion des professionnels de santé à l'égard de la vaccination peut contribuer à améliorer l'acceptation de la vaccination des enfants.

تقييم حركة مناهضة التطعيم في تركيا: تقارير نوعية من أطباء الأسرة

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الخلاصة

الخلفية: تشهد تركيا تناقصاً في معدلات تطعيم الأطفال في سياق التزايد الواضح لحركات مناهضة التطعيم.

الأهداف: هدفت هذه الدراسة إلى تقييم حركة مناهضة التطعيم من خلال تجارب أطباء الأسرة في التواصل مع الآباء والأمهات المناهضات للتطعيم في تركيا.

طُرق البحث: أجرينا 39 مقابلة متعمقة وجهًا لوجه مع أطباء الأسرة في محافظة صقاريا الذين كانت لهم تجارب في التواصل مع الآباء والأمهات المناهضات للتطعيم. وحصلنا على تسجيل صوتي لجميع المقابلات باستثناء مقابلة واحدة بإذن من المشاركين؛ وفرغت تلك التسجيلات حرفياً وتم التحقق منها. واستُخدم نهج مواضيعي لتحليل البيانات. وُجمعت البيانات حتى حد التشبع.

النتائج: كانت الآثار الجانبية المحتملة للتطعيم أكثر الشواغل شيوعاً، يليها منشأ اللقاحات، ثم المخاوف الدينية، وعدم الثقة في اللقاحات. وقال المشاركون إن موقفهم من الآباء والأمهات المناهضات للتطعيم كان فضولياً، ومُخبراً بالمعلومات، ومُخففاً للقلق. وأفادوا بأنهم استطاعوا إقناع معظم الآباء بتطعيم أطفالهم من خلال توضيح الموقف الصحيح، غير أنه كان من الصعب إقناع الآباء المتعلمين تعليماً عالياً أو الواقعيين تحت تأثير القيادات الدينية. وأشاروا إلى أن وسائل التواصل الاجتماعي هي العامل الأكثر فعالية في انتشار حركة مناهضة التطعيم. وأكدوا على أهمية الثقة في الطبيب في زيادة تقبل اللقاح. وأشار البحث إلى بعض الحلول مثل تثقيف القادة الدينيين والأسر، واستخدام الأدوات الإعلامية بفاعلية، ووضع سياسات التطعيم الإلزامي.

الاستنتاجات: أبدى الآباء أسباباً مختلفة لرفض تطعيم أطفالهم، ولكن أطباء الأسرة كانوا مقنعين في تواصلهم ونهجهم. وقد يساعد التوجيه الفعال لتجارب العاملين في مجال الرعاية الصحية على زيادة تقبل تطعيم الأطفال في المستقبل.

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