

Reasons for COVID-19 vaccine rejection: A qualitative study

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ABSTRACT

Purpose: The aim of this study was to investigate the reasons for refusal of those who refused to be vaccinated with any of the vaccines developed against COVID-19 (Coronavirus Disease) and to offer solutions.

Methods: In this descriptive and cross-sectional qualitative study, a semi-structured interview method was used as the data collection tool. Also, thematic analysis was chosen as the analysis method. The population of the study consisted of people who had not been vaccinated against COVID-19. The purposive sampling method was used as the sampling method. Informed consent was obtained from the participants.

Results: As a result of the study, six main themes and sub-themes related to the reasons for these refusals against vaccination were reached. These themes are Individual Effects of COVID-19, Information, Confusion about Vaccination, Personal Fears of Vaccination, Belief in the Protectiveness and Reliability of the COVID-19 Vaccine, Pressure on Vaccination and Mask Use, and Preference for Vaccination Alternatives.

Conclusion: During pandemics, distrust and uncertainty are often among the reasons why people do not get vaccinated. Accordingly, it is necessary to carry out health services for vaccination and increasing social immunity more transparently, to ensure that the society has access to sufficient information about the vaccine, and to determine and implement appropriate policies to eliminate mistrust about the vaccine and the pandemic period.

Keywords: Vaccine refusal, COVID-19, pandemic, thematic analysis.

ÖZET

Amaç: Bu çalışmanın amacı, daha önce aşılanmamış ve çeşitli nedenlerle COVID-19 hastalığına karşı geliştirilen aşılarından herhangi birini olmayan kişilerin görüşleri alınarak, aşı reddinin nedenlerini araştırmak ve çözüm önerileri sunmaktır.

Yöntem: Tanımlayıcı ve kesitsel olarak yapılan bu nitel çalışmada veri toplama aracı olarak yarı yapılandırılmış görüşme yöntemi; analiz yöntemi olarak tematik analiz kullanılmıştır. Araştırmanın evrenini COVID-19 aşısı olmamış kişiler oluşturmuştur. Örneklem yöntemi olarak amaçlı örneklem yöntemi kullanılmıştır. Katılımcılardan bilgilendirilmiş onamları alınmıştır.

Bulgular: Çalışma sonucunda aşı reddinin nedenlerine ilişkin altı ana tema ve alt temaya ulaşıldı. Bu temalar COVID-19'un Bireysel Etkileri, Bilgi, Aşılamaya Hakkındaki Karışıklık, Aşılamaya Hakkındaki Kişisel Korkular, COVID-19 Aşısının Koruyuculuğuna ve Güvenilirliğine İnanç, Aşılamaya ve Maske Kullanımına Yönelik Baskı ve Aşı Alternatiflerine Yönelik Tercihtir.

Sonuç: Pandemi dönemlerinde insanların aşı yaptırmamasının nedenleri arasında güvensizlik ve belirsizlik sıklıkla yer alır. Buna göre aşılamaya ve toplumsal bağışıklığın artırılmasına yönelik sağlık hizmetlerinin daha şeffaf bir şekilde yürütülmesi, toplumun aşı hakkında yeterli bilgiye erişiminin sağlanması, aşıya ve pandemi dönemine yönelik güvensizliği ortadan kaldıracak uygun politikaların belirlenmesi ve uygulanması gerekmektedir.

Anahtar Kelimeler: Aşı reddi, COVID-19, pandemi, tematik analiz.

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In 2019, the coronavirus outbreak in Wuhan, China, started to threaten the whole world globally (1). "Coronavirus disease is an infectious disease caused by the SARS-CoV-2 (Severe Acute Respiratory Syndrome-Coronavirus 2) virus"(2). As of March 2020, the COVID-19 (Coronavirus Disease) pandemic has turned into a process that urgently needs to be responded to for public health and has started to be closely monitored by the Ministry of Health (3).

Although non-pharmaceutical interventions such as wearing face masks, using hand sanitizers and observing social distancing rules are recommended in our country and other countries to protect against coronavirus disease, vaccination is considered to be the most reliable and effective method for a non-temporary solution (4). Vaccines play a role in creating an effective defense response to microorganisms that enter the body without causing disease (5). The number of people vaccinated with COVID-19 vaccines is almost one billion people in low-income countries and seventy percent of the population in high-income countries as of May 22, 2022 (2).

The Strategic Advisory Group on Immunization (SAGE), established in 1999 by the Director-General of the World Health Organization (WHO), expressed concern that the way forward to address vaccine hesitancy was not evident in 2012 due to declining vaccination rates worldwide, and established the Vaccine Hesitancy Working Group to assess and address the global challenge of vaccine hesitancy, which poses a significant threat to the integrity and acceptance of vaccines and immunization programs worldwide (6).

Despite scientific sources supporting that vaccines are safe and beneficial; vaccine rejection is still quite high (7). Anti-vaccine views are put forward by citing the side effects of vaccine (8). Vaccine hesitancy is a rapidly growing global threat that poses the risk of losing the gains achieved so far in the fight against vaccine-preventable diseases (9). As with all other vaccines, resistance has developed for various reasons to vaccines developed against COVID-19, which has a very huge area of effect in all countries.

This study aims to investigate the reasons for refusal of those who refused to be vaccinated with any of the vaccines developed against COVID-19 (Coronavirus Disease) and to offer solutions. In this way, evidence will be provided for policy implementations to prevent vaccine refusal. Training prepared for the community can

be planned and tailored to the needs of individuals so that the process of reaching a solution can be completed quickly.

Material and Method

In this descriptive and cross-sectional qualitative study, the semi-structured interview method was used as a data collection tool and thematic analysis was chosen as the analysis method. The ethical permission for the research was obtained The Health Sciences Ethics Committee of Ankara Yıldırım Beyazıt University approved the study on April 07, 2022, with the decision number 06 and research code 2022-764. The population of the study consists of people who have not been vaccinated against COVID-19. The purposive sampling method was used as the sample selection method. While selecting participants who have not been vaccinated against COVID-19 for this study, some criteria were taken into consideration such as, ease of access to participants, residence in the same city and the presence of common acquaintances. Interviews continued until data saturation was achieved and the interviews were completed with 12 people. First of all, the interviewees were selected from those who declared that they were not vaccinated against COVID-19. The interviewees were informed about the subject, and their consent was obtained. Before starting the interview, a voice recorder was used to ensure that what was said was included in the research in a complete form. The interview participants were identified by giving a pseudonym with their age and gender. Questions were asked under two headings: demographic questions and general questions about COVID-19. The audio recordings were converted into text format and the answers to the questions about demographic characteristics were analyzed using SPSS (IBM SPSS Statistics 22.0 (IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY, IBM Corp.) and the characteristics such as median age, education level, occupational education level, etc. were grouped and tabulated as n-%. While analyzing this study, firstly the participants' voice recordings were transcribed verbatim in order to get to recognize the data. Giorgi's four-stage methodology, as cited by Dinçer (2019), was used in the following methodology (10). The limitations of the study are that the participants did not have any previously produced COVID-19 vaccine. Demographic characteristics such as age, gender, and occupation were not differentiated when selecting the participants.

Results

Among the participants, 58.33% (n=7) were female and 41.67% (n=5) were male with a median age of 29 years (min:25 - max:53; mean age= 32±9.63). Among the participants, four were nurses (33.33%), two were teachers (16.67%), one was computer programmer (16.67%), and one was military personnel who had a bachelor's degree (66.67%; n=8). In addition, 41.67% (n=5) of the participants were single and 58.33% (n=7) were married 83.33% (n=10) of the participants did not have a chronic disease, and when asked whether they had been vaccinated before, 75% (n=9) of the participants stated that they had received childhood vaccinations, 8.33% (n=1) had received both childhood vaccinations and the 3-mixed vaccine when traveling abroad, 8.33% (n=1) had received childhood vaccinations and rabies vaccine in addition, and 8.33% (n=1) had received Tetanus vaccine because it was mandatory at work. It was observed that 66.67% (n=8) of the participants had no children, 8.33% (n=1) had one child and 25% (n=3) had two children (Table 1).

Table 1 Demographic questions			
		n	%
Age	25-35 years old	10	83,33
	36-55 years old	2	16,67
Gender	Female	7	58,33
	Male	5	41,67
Education Status	Primary School Graduate	2	16,67
	High School Graduate	1	8,33
	Higher School Graduate	1	8,33
	University Graduate	8	66,67
Profession	Nurse	4	33,33
	Teacher	2	16,67
	Military Personnel	1	8,33
	Computer Programmer	1	8,33
	Retired	1	8,33
	Tradesmen	1	8,33
	Housewife	1	8,33
Marital Status	Single	5	41,67
	Married	7	58,33
Whether there is a Chronic Disease	No	10	83,33
	Yes	2	16,67
Previous Vaccination Status	Childhood vaccinations	9	75,00
	Childhood vaccinations and the 3-valent mixed vaccine	1	8,33
	Childhood vaccinations and rabies	1	8,33
	Tetanus	1	8,33
Number of Children	Childless	8	66,67
	1 Child	1	8,33
	2 Children	3	25,00

In order to protect the identities and private information of the participants, they were given a pseudonym using their participant number, gender and age (Table 2).

Table 2: Pseudonyms are given to participants according to age and gender			
No	Age	Gender	Person Nickname
1	25	Male	E1, 25
2	26	Female	K2, 26
3	26	Female	K3, 26
4	28	Male	E4, 28
5	28	Female	K5, 28
6	28	Female	K6, 28
7	30	Female	K7, 30
8	33	Male	E8, 33
9	30	Female	K9, 30
10	35	Male	E10, 35
11	52	Female	K11, 52
12	53	Male	E12, 53

As a result of thematic analysis, the qualitative data were analyzed: Six main themes and their sub-themes are as follows:

A. COVID-19 individual effects

- Economic
- Loneliness
- Fear

A negative process.

Some of the participants mentioned that COVID-19 caused the deterioration of economic conditions in countries. Also, they stated that some people lead an isolated life because they are afraid of contamination during the disease process, which leads to isolation. Moreover, they emphasized that they felt fear during the disease process due to uncertainty and information pollution about the disease. Participants who were psychologically and socially affected stated that this traumatizing effect negatively affected their opinions on the COVID-19 vaccine.

B. Information confusion about vaccination

- Lack of information about vaccination
- Information pollution from social media, the internet, and the social environment.

Some of the participants said that they did not get vaccinated because they found the explanations of health services insufficient. The negative experiences of people who were vaccinated on social media, the internet and in their social circles influenced the opinions of the participants and affected them negatively about getting vaccinated.

C. Personal fears about being vaccinated.

- Observing negative experiences about risks and side effects.

As cause of infertility

As cause of heart attacks

- Fear of future unknown consequences of vaccination
- Disbelief in the disease, thinking it can be an artificial virus.
- Lack of trust

Participants stated that they did not want to be vaccinated against COVID-19 because the effect of the vaccine was not yet clear, and they did not know what the consequences would be for 5-10 years. Two participants indicated that they did not get vaccinated because they already had diseases and thought that it would be worse if they were vaccinated, while some of the participants remarked that they did not get vaccinated because they were told that there were side effects such as heart attack and infertility.

D. Belief in the protection and safety of the COVID-19 effects

- Short production time compared to other vaccines

- Deaths and illnesses despite vaccination

- Perceived low severity of illness.

Participants expressed their uncertainty about the COVID-19 vaccines administered in our country (Sinovac-BioNTech) because they are produced in a shorter time compared to all the vaccines they know. They stated that the fact that there were people who had a very bad disease and died despite being vaccinated pushed them to be immunized by being sick without vaccination.

E. Pressure to use vaccines and masks.

- Pressure from family, friends, and workplace

- Making vaccination mandatory for entry to shopping malls and public areas

In their answers to the questions, some of the participants stated that they did not take special precautions for COVID-19 and used masks because it was mandatory, on the other hand all other participants stated that they were attentive to isolation, hand hygiene, constantly used masks, carried hand sanitizer, kept their distance from people, did not visit and did not go to crowded places.

F. Preference for the use of vaccine alternatives

Participants preferred to use vaccine alternatives such as masks, distance, hygiene, and natural protection methods instead of vaccination. They stated that by doing so, they would protect themselves from the unknown side effects of the vaccine and protect themselves in a healthier process.

All main themes are directly related to each other and consist of main themes and sub-themes related to the themes and their relationship with each other (Figure 1). The demographic characteristics of the participants and the answers they gave when asked about the reasons for vaccine refusal are given below in Table 3 with the help of Legizing-Mapping.

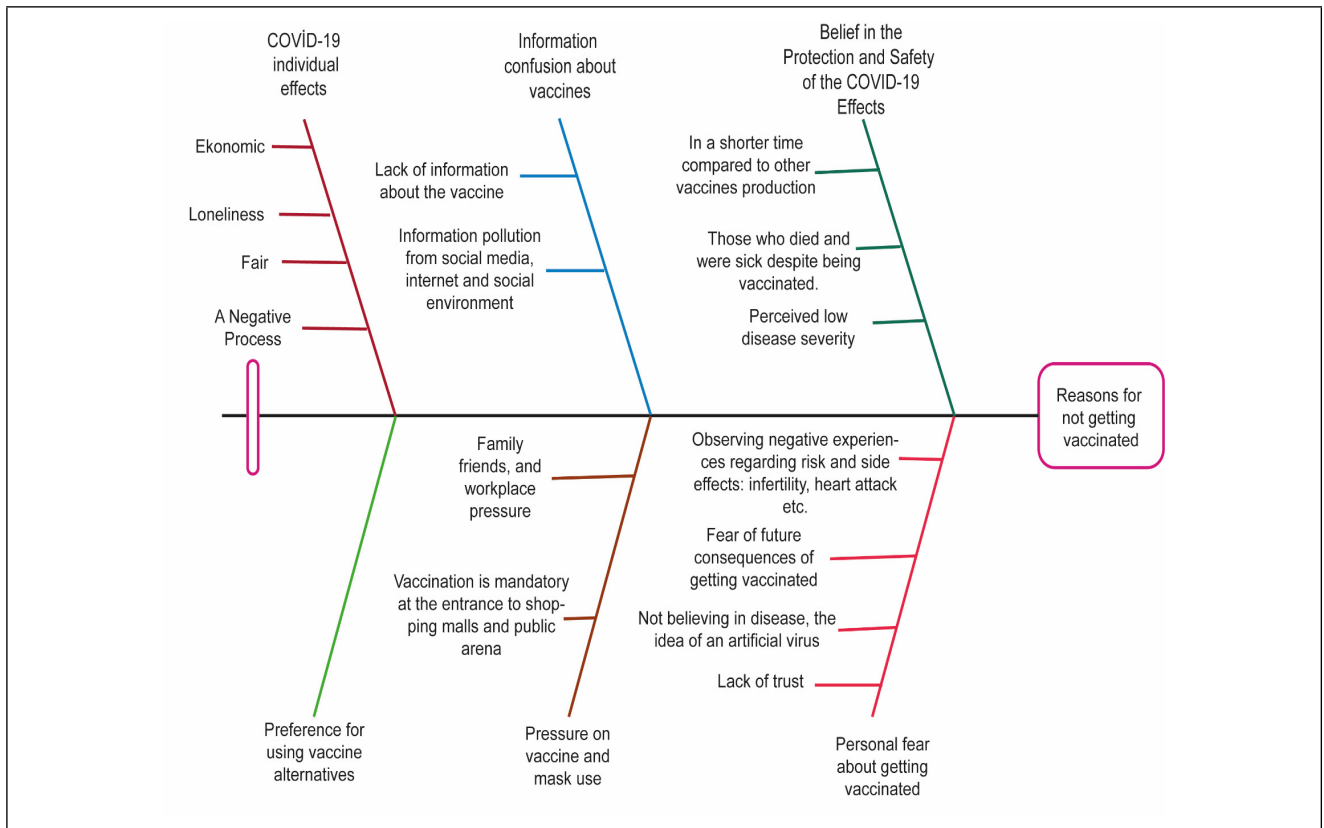


Figure 1: Fishbone diagram showing the relationship between themes and sub-theme

Table 3 Demographic characteristics of participants and reasons for vaccine refusal

Nickname	Gender	Age	Profession	Attitude towards vaccine	Being sick with COVID-19	COVID-19's Negative Impact of Consequences	Affected by information confusion about vaccination	Negative concerns about vaccine intake	Pressure to Vaccinate and Use Masks	Preference for Use of Vaccine Alternatives
E1, 25	Male	25	Tradesmen	0	0	✓		✓	✓	✓
K2, 26	Female	26	Teacher	0	●	✓	✓	✓	✓	✓
K3, 26	Female	26	Nurse	0	●	✓	✓	✓	✓	
E4, 28	Male	28	Intensive care nurse	0	●	✓	✓	✓	✓	✓
K5, 28	Female	28	Nurse	0	●		✓	✓	✓	✓
K6, 28	Female	28	Nurse	0	●	✓	✓	✓		
K7, 30	Female	30	Teacher	0	●			✓		
E8, 33	Male	33	Military personal	0	●	✓		✓		✓
K9, 30	Female	30	Sales Consultant	0	0	✓		✓		✓
E10, 35	Male	35	Computer programmer	0		✓		✓		
K11, 52	Female	52	Housewife	0	0		✓	✓		
E12, 53	Female	53	Retired	0	0	✓	✓	✓		

● Positive (n=7; %=58.33); 0 Negative (n=5; %=41.66); ✓ Basic reason

Discussion

When the literature is examined, except for COVID-19 pandemic, reasons for rejection of vaccination are frequently encountered. Due to the deaths and other problems caused by COVID-19 disease, all countries have sought a solution. As in the pandemics that have occurred from the past to the present, vaccine development studies have started as soon as possible because the way to get rid of COVID-19 disease is vaccination. The vaccines developed were rejected by many people because they were developed in shorter periods of time rather than in sufficient time like the previous ones, and the lack of satisfactory information on how effective they are or what their side effects are, and this situation has emerged as an obstacle to social immunization (11).

Wu et al. investigated the symptoms of post-traumatic anxiety, stress and depression during the pandemic period and reported that the fear of being sick with the fear of uncertainty, desperation, despair and unhappiness felt like the same epidemic (12). In our study, the participants stated that they were very helpless and hopeless because they were afraid of the current and future consequences of the pandemic period. Due to this negative situation, participants developed resistance to vaccination.

In a study conducted in Mexico, Jones et al. found that individuals' risk perception and that their fear levels in the face of uncertainty have greatly increased, and their quality of life has decreased due to the frequent coverage of the COVID-19 outbreak in the news media (13). Similarly, in our study, participants who expressed their isolation due to the devastating effects of the epidemic expressed their concerns about how they return to normal life. This process negatively affected their quality of life due to the quite long duration of the pandemic period and their hesitation about the vaccine.

In the qualitative study conducted by Çapanoğlu with health care workers and families who refused vaccination, health care workers reported that they refused to be vaccinated because they thought that external powers wanted to harm our nation and country through vaccines, that vaccines have harmful side effects and that side effects are kept as a secret to pave the way for pharmaceutical companies to make profit, and that people in eastern provinces refused to be vaccinated because they believed it will result in infertility and low birth rates. Therefore, they refuse to be vaccinated (14). In the results of our study, which is very similar to Çapanoğlu's qualitative study,

participants expressed similar reasons such as infertility, causing heart attack, getting affected negatively in the future, and the idea that the disease could be artificially produced is among the main reasons for not being vaccinated.

In the study conducted by Çıtak and Aksoy on vaccine refusal, when the reasons for vaccine refusal were examined, most people think that the vaccination includes most harmful chemical substance, the fear that vaccine producers may have malicious intentions, and the idea that natural immunization or preference for natural methods may be more effective in protecting against diseases (15). As in our study, participants tend to refuse vaccines in cases where they did not have trust. In cases of lack of trust in health services, people preferred to protect themselves with natural immunization without vaccination.

Conclusion

To prevent contact-related contamination during the COVID-19 pandemic, optional psychological support should be provided at the point of returning to normal life for the society, which has become lonely due to social isolation, working life coming to a standstill and curfews imposed.

Online training should be organized to overcome the lack of information about vaccines used in our country, and it should be taken into consideration that everyone's educational needs can be different. Training should be easily accessible through official channels when they need them.

Since it is unpredictable how many years it would take humanity to achieve social immunity through natural means and the extent of the social damage it could cause, appropriate information should be provided to those who prefer natural means, emphasizing the importance of vaccination.

Scientific studies should be conducted on methods to increase social acceptance of vaccines to reduce vaccine refusal in the community and solutions should be proposed based on these studies. The use of mass media and social media in informing and raising awareness of the public about the results of scientific studies on vaccination and its effects will enable rapid progress in the fight against vaccine refusal.

Healthcare personnel who carry out vaccination practices have great responsibilities in studies on vaccine refusal. Healthcare personnel should approach people who have concerns and doubts about vaccines and their beliefs in a respectful manner.

Declarations

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The authors have no conflicts of interest to declare.

Ethics approval

The Health Sciences Ethics Committee of Ankara Yıldırım Beyazıt University approved the study on April 07, 2022, with the decision number 06 and research code 2022-764.

Availability of Data and Material

Available.

Authors' contributions

Concept – A.G.K., M.D.; Design – A.G.K., M.D. Supervision – M.D.; Funding – A.G.K.; Materials – A.G.K., M.D.; Data Collection and/or Processing – A.G.K.; Analysis and/or Interpretation – A.G.K., M.D.; Literature Review – A.G.K., M.D.; Writer – A.G.K., M.D.; Critical Reviews – A.G.K., M.D.

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