Qualitative study on information, trust in and access to COVID-19 vaccines among adolescents at a healthcare center in Buenos Aires

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ABSTRACT

Introduction. During adolescence, individuals start to make autonomous decisions about their health. Vaccination involves contextual, group, and vaccine-specific dimensions. We sought to know the information, trust, and decision to receive the COVID-19 vaccine among adolescents who attended a healthcare center in Buenos Aires.

Objectives. To identify settings and channels through which adolescents accessed information about the COVID-19 vaccine at a healthcare center in Buenos Aires. To describe their opinions about the different statements on vaccination. To describe their participation in COVID-19 vaccination. To identify barriers and facilitators to COVID-19 vaccination in this population.

Population and methods. Qualitative study. Semi-structured interviews with adolescents who attended this healthcare facility. The sample was heterogeneous; the sample size was estimated by theoretical saturation. A thematic analysis of data was done.

Results. A total of 14 interviews were conducted. Interviewees obtained information about the COVID-19 vaccine from their families, TV, and social media. All received information from both official campaigns and anti-vaccine communications. They analyzed the information they received and formed their own opinion. Their decision about the vaccine was not always respected. Hesitancy, a low perception of risk, fear of needles, administrative and geographic barriers were reasons for not receiving the vaccine.

Conclusions. Communication strategies targeted at adolescents are required that encourage their involvement in access to vaccination.

Keywords: vaccine hesitancy; right to health; COVID-19 vaccines; health knowledge, attitudes, practice; adolescent.
INTRODUCTION

In 2019, the World Health Organization (WHO) identified vaccine hesitancy as one of the main threats to global health. This phenomenon worsened with the accelerated development, authorization, and distribution of COVID-19 vaccines.

In Argentina, trust in vaccination in 2022 improved compared to 2021, but did not regain pre-pandemic levels. Adolescence is the age group with the lowest levels of trust in vaccination.

The decision to receive the COVID-19 vaccine among adolescents poses a novel situation because it is a non-mandatory vaccine and because vaccination was not present in adolescence: as per the national vaccination schedule, children must be vaccinated until 11 years of age, an age at which the decision is still left to their caregivers.

During adolescence, individuals start to make decisions about their health in an autonomous manner. This progressive autonomy is recognized by the Civil and Commercial Code: as of 13 years of age, adolescents may access low-risk health practices without the authorization of their caregivers; as of 16 years of age, their full decision-making capacity regarding their health is recognized.

The promotion of the right to vaccination among adolescents must recognize such autonomy. Several studies recommended promoting adolescent participation to improve vaccination coverage.

Different models have been developed to explain access to vaccination. This process involves several dimensions:

- Contextual: media presence; opinion leaders; religious, cultural, socioeconomic factors; geographical barriers.
- Group and individual: family members’ experience, beliefs and attitudes about health, relationship with health services, risk-benefit perception, collective responsibility.
- Vaccination-related: risk of infection and benefits of vaccination, new vaccine, route of administration, costs, attitude of healthcare providers.

At the Center for Health and Community Action (Centro de Salud y Acción Comunitaria, CeSAC) no. 28, it was observed that adolescents not always agreed with their caregivers (for and against) in relation to the COVID-19 vaccination and their decision was not always respected. The following questions guided this study: How does the process of information, trust and decision-making regarding vaccination among adolescents work? What is the extent of adolescents’ participation in decision-making?

The study objectives are detailed below:

- To identify the settings (family, peers, school) and channels (mass media and social media) through which adolescents attending the CeSAC 28 accessed information about the COVID-19 vaccine.
- To describe their opinions about the different statements on vaccination.
- To describe their participation in decision-making regarding COVID-19 vaccination.
- To identify barriers and facilitators to COVID-19 vaccination in this population.

POPULATION AND METHODS

This was a qualitative study. The study population was made up of adolescents aged 13 to 17 years attending the CeSAC 28 and residing in Argentina from the start of COVID-19 vaccination until the study was conducted.

CeSAC 28 is located in the south of the City of Buenos Aires. This area encompasses 2 working-class neighborhoods, a residential area, factories, and 3 secondary schools. Adolescents mainly attended the site for health checkups, physical fitness certificates, and sexual healthcare. For the most part, they had public health coverage exclusively, and resided or studied in the area.

Semi-structured interviews with open questions arranged around thematic focuses were conducted (Supplementary material). This instrument allowed to recognize attitudes, contradictions, and ambiguities about vaccination and to address the complexity of their involvement in the decision to be vaccinated.

The sample was intentionally heterogeneous and, therefore, initially, adolescents who attended this healthcare facility of different sexes, ages, and vaccination statuses were invited to participate. Subsequently, boys and unvaccinated adolescents were especially invited to participate, as there were few participants with these characteristics.

The final number of interviews was defined by theoretical saturation, i.e., interviews were conducted until no new information was obtained about the decision-making process and about access to information about the vaccine.

The interviews were conducted by 2 investigators, who were trained by the team sociologist. The interviews were done before or
after the consultation at the healthcare center. To prevent participation in the research from interfering with the physician-patient relationship, it was established that the interviewers should not have been physicians of the interviewees; this criterion also sought to minimize any bias.

The audio of the interviews was recorded and a thematic analysis of the data was performed; this is an inductive and iterative process involving: reading, coding, reduction, presentation, and overall interpretation of data. After reading the recorded interviews, the interview fragments were coded in a spreadsheet in a matrix with thematic focuses. New thematic focuses were added to those proposed initially based on consistent themes. The thematic focuses were: settings and channels of information (family, peers, school, mass media, social media), social statements and attitudes towards vaccination, relationship with health services and access to the vaccine, participation in the vaccination process. Initially, 2 team physicians coded the interviews; then, the sociologist conducted a new round of coding, seeking to triangulate the coding.

The study protocol was approved on 9-5-2022 by the Ethics Committee of Hospital Zubizarreta, under registration code 7616, resolution DI-2022-167-GCABA-HGADS. Adolescents were invited to voluntarily participate in the interviews and were asked to sign an informed consent.

RESULTS
A total of 14 interviews were conducted between October 2022 and February 2023. The characteristics of participants are described in Table 1.

**Table 1. Characteristics of interviewed participants**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>5</td>
</tr>
<tr>
<td>Female</td>
<td>9</td>
</tr>
<tr>
<td>Age in years</td>
<td></td>
</tr>
<tr>
<td>Median (range)</td>
<td>15 (14–17)</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
</tr>
<tr>
<td>Attending secondary school</td>
<td>13</td>
</tr>
<tr>
<td>Complete secondary education</td>
<td>1</td>
</tr>
<tr>
<td>Employment status</td>
<td></td>
</tr>
<tr>
<td>Currently working</td>
<td>2</td>
</tr>
<tr>
<td>Place of residence</td>
<td></td>
</tr>
<tr>
<td>Villa 15</td>
<td>13</td>
</tr>
<tr>
<td>Villa Lugano</td>
<td>1</td>
</tr>
<tr>
<td>Type of household</td>
<td></td>
</tr>
<tr>
<td>Nuclear family</td>
<td>12</td>
</tr>
<tr>
<td>Composite/extended family</td>
<td>2</td>
</tr>
<tr>
<td>Vaccination</td>
<td></td>
</tr>
<tr>
<td>Complete vaccination schedule</td>
<td>4</td>
</tr>
<tr>
<td>Incomplete vaccination schedule</td>
<td>8</td>
</tr>
<tr>
<td>No vaccination</td>
<td>2</td>
</tr>
<tr>
<td>Total number of interviewed</td>
<td>14</td>
</tr>
</tbody>
</table>

**Access to information about the COVID-19 vaccine**

Vaccination was not a relevant topic among peer groups. In the setting of the social isolation due to the pandemic, families became a setting of high information flow (Table 2).

The greatest quantity of information about the vaccines was obtained from TV. Participants also mentioned that they received a lot of information from the Internet, even without looking for it. All participants received information from official vaccination campaigns in social media (Table 2).

In relation to the school, there is agreement in that both teachers and authorities recommended vaccination, and sometimes provided information. Vaccination was introduced in the school curriculum in just 1 case. Although the vaccine was not required to attend school, in some cases such hypothetical possibility served as a motivation to get vaccinated (Table 2).

**Information**

Regarding the information accessed by interviewees, they interpreted that vaccination reduced the risk of getting COVID-19 or the risk for serious complications. They also recognized adverse effects and, in several cases, acknowledged herd immunity. In general, they were unaware of vaccine brands and the vaccination schedule. They did not have information about the vaccines included in the national vaccination schedule (Table 2).

Regarding their rights to access healthcare, 5 interviewees did not know they could attend appointments on their own or there was confusion.
about it. In the case of a migrant interviewee, she was unaware of her right to healthcare even without a national identity card document (Table 2).

Confidence
Trust was built on ambiguity, ambivalence, and contradictions. There was no strict division between those who trusted in and those who rejected vaccination. Even those who decided to be vaccinated reported feelings of fear and uncertainty, especially in relation to adverse effects. One of the interviewees commented that she was in favor, opposing her hesitant family, but decided not to be vaccinated (Table 3).

Anti-vaccination communications
All participants were in contact with communications of vaccine hesitancy via Facebook, Instagram, YouTube, TV shows (they mostly pointed to a specific TV channel), family members, or peers. Two adolescents were more sympathetic to these discourses, pointing out that vaccine hesitancy was related to the development times of a new vaccine, its effectiveness, and the suspected origin of the pandemic (Table 3).

Interviewees analyzed the information they received and formed an autonomous opinion, both those who trusted vaccines and those who did not. They were not always able to explain why certain information was more reliable than other. In relation to the mass media, they indicated that the word of journalists, healthcare providers, and scientists made them trust in vaccination (Table 3).

Decision-making: involvement and autonomy
For most interviewees, the decision to be vaccinated was shared with their caregivers, accompanying the development of progressive autonomy through the exchange of opinions. Five adolescents disagreed with their parents in their opinion about vaccination. Sometimes, the decision to be vaccinated was conflictive and their opinion was not always taken into account (Table 4).

Barriers and facilitators
Among the reasons for non-vaccination or incomplete vaccination schedules, geographic or administrative barriers were described: distance from vaccination centers, difficulties in enrollment, ID requirements, and vaccine availability. They also mentioned vaccine hesitancy or fear of adverse effects, as well as the perception of low risk of getting COVID-19 (Table 5).

The following facilitators were identified, especially among participants who were hesitant: increased confidence in the vaccine when their acquaintances were vaccinated and increased coverage in general; convenience due to the (actual or imagined) vaccination requirement for travel, work, study, or sports activities; the perception of risk with the increase in morbidity and mortality due to COVID-19; and collective responsibility (Table 5).

DISCUSSION
Consistent with other studies conducted in Argentina, this study found that TV, social
media, and families were useful in providing information and forming opinions about COVID-19 vaccines. Different studies point to social media and the Internet as privileged spaces for the circulation of anti-vaccination information, with greater consumption among youth. It has been noted that online settings tend to segregate positions or to a permeability that favors vaccine hesitancy content.

The interviewees received information from “both sides” and did not trust all the information they obtained. It is worth mentioning that they all came into contact with official vaccine campaign information on social media and anti-vaccine communications.

As other studies suggest, interviewees’ perspectives on vaccination are not expressed in dichotomous positions between full confidence and distrust, but as a spectrum of positions. Their opinions entail ambivalence and fears, without this meaning rejection. In 2 interviews, ideas related to vaccine hesitancy were identified; distrust of vaccines was related to its development times, suspicion about the origin of the pandemic, and vaccine effectiveness, aspects described in the specialized literature.

The “5 C’s” model allows to analyze barriers and facilitators to vaccination:

- **Confidence:** in the vaccine, the health system, and public policies.
- **Complacency:** perception of the risk of disease and the need to get vaccinated.
- **Constraints:** geographic, financial, or cultural barriers.
- **Collective responsibility.
- **Calculation:** ability to obtain full information about the vaccine.

These elements were observed in the interviews; vaccine hesitancy was not the only barrier identified.

A finding of this study was that interviewees were unaware of the vaccines included in the national vaccination schedule and of their rights in relation to healthcare access. It is worth noting that a recent study carried out in our country pointed out that the main reason for an incomplete vaccination schedule in adolescents is the lack of knowledge about mandatory vaccines and the adults responsible for not taking them to be
Studies conducted in other countries investigated the ethical-legal possibilities for vaccinating adolescents who wanted to be vaccinated without the authorization of their caregivers or disseminated strategies to convince adolescents to vaccinate them. The legal framework in Argentina settles these discussions; however, there is still a lack of knowledge about

### Table 4. Quotations regarding decision-making and access to COVID-19 vaccines

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shared decision-making</td>
<td>• We decided to get the vaccine as a family, we all agreed. (Boy, 17 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• They asked me, we talked about it, I made part of the decision on my own (...) and they also did their part. (Boy, 16 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• I did it [get a vaccine appointment], but of course I had my mom’s consent. (Girl, 15 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• My mom decided it, but she asked me. I told them that once the vaccine was here, I was going to get it. (Girl, 15 years old, vaccinated)</td>
</tr>
<tr>
<td>Disagreement in opinions with their adult</td>
<td>• When my parents started talking about the vaccine, saying they were afraid of it, how can you be afraid if you didn’t even get vaccinated? (Girl, 15 years old, unvaccinated)</td>
</tr>
<tr>
<td>role models</td>
<td>• My mom didn’t want us to be vaccinated because a relative in the United States told her that the vaccines were not approved and were dangerous. I always wanted to get the vaccine. (Boy, 14 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• [When vaccines were available for adolescents] I was kind of happy, but at the same time, I had doubts (...) I heard my mom all the time saying “you’re going to die if you get the vaccine” (...). She was against it and wanted to scare me, she made me doubt it was bad for me. (Boy, 14 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• My mom said we had to get it. I thought it wasn’t that effective. I thought getting the vaccine would not be a great benefit. It was a reinforcement, but I didn’t feel it was so necessary. (Girl, 14 years old, vaccinated)</td>
</tr>
<tr>
<td>Disagreement in decision-making</td>
<td>• I thought getting the vaccine could be important. But my mom didn’t take me to the vaccination center. And I didn’t want to go on my own. (Boy, 17 years old, unvaccinated)</td>
</tr>
<tr>
<td></td>
<td>• But my mom was against it and wanted to scare me about it (...) I convinced my mom to do it. (Boy, 14 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• I got vaccinated out of obligation, my mother forced me to. (Girl, 15 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• It was a while and I waited 2 months (...) My mom really wanted me to get vaccinated, and it was a requirement for my training (...) I was the only one who had not been vaccinated [in my family]. “Let’s do it, you have to get the vaccine.” (Girl, 17 years old, vaccinated)</td>
</tr>
</tbody>
</table>

### Table 5. Quotations regarding barriers and facilitators to access to COVID-19 vaccines

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Quotations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
<td>• It was far away and my mom didn’t want to travel far. (Girl, 15 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• They told me that with my ID from Paraguay I couldn’t get it. “She needs to have an Argentinian ID.” (Girl, 15 years old, vaccinated)</td>
</tr>
<tr>
<td>Convenience</td>
<td>• It could be serious, but especially for adults. (Girl, 14 years old, vaccinated)</td>
</tr>
<tr>
<td></td>
<td>• Whether you got the vaccine or not, you could get COVID anyway. (Girl, 14 years old, vaccinated)</td>
</tr>
<tr>
<td>Confidence</td>
<td>• I was scared (...) of developing a different effect, we didn’t know what it was made of, it could be harmful. (Boy, 16 years old, vaccinated)</td>
</tr>
<tr>
<td>Facilitators</td>
<td>• I was scared of getting COVID and infecting my sister, my dad. In part, that’s why I decided to get the vaccine. (Boy, 16 years old, vaccinated)</td>
</tr>
<tr>
<td>Collective responsibility</td>
<td>• Between developing adverse effects or getting COVID, what’s better? An adverse effect. (Girl, 14 years old, vaccinated)</td>
</tr>
<tr>
<td>Complacency</td>
<td>• Almost everyone was getting vaccinated and nothing happened. (Boy, 16 years old, vaccinated)</td>
</tr>
<tr>
<td>Confidence</td>
<td>• I had to get the vaccine because I wanted to train. (Girl, 17 years old, vaccinated)</td>
</tr>
<tr>
<td>Convenience</td>
<td>• You were supposedly not allowed to leave the country if you weren’t vaccinated, and we wanted to go back to Paraguay. (Girl, 15 years old, vaccinated)</td>
</tr>
</tbody>
</table>
adolescents’ rights related to their access to healthcare.

The results regarding the formation of autonomous opinions are in line with studies that highlight the importance of promoting the participation of adolescents in the decision to be vaccinated. Social media have emerged as a favorite channel for campaigns targeting adolescents. It seems important to add to the messages promoting vaccination an invitation to participate in decisions about their health and the dissemination of their health rights. Involving adolescents in the design of communication strategies has been mentioned as another key aspect for their success.

It is worth noting that interviewees mentioned the absence of this theme in the school curriculum. Schools may be the setting for learning about vaccination and the rights of adolescents and for developing a critical view of the information they receive.

The results of this study may guide the design of strategies for communication and promotion of the rights to integral health and vaccination in this population. A strength of this study is the approach to a little explored topic: participation in the decision to be vaccinated from the perspective of adolescents. The qualitative methodology made it possible to address complex processes and ambivalences that quantitative studies cannot detect.

A limitation of this study is that it may be subject to recall bias due to the time elapsed between the interview and the decision to vaccinate. To counteract this, we sought to contextualize the interviews and allow time for them to situate themselves at the time vaccination began.

CONCLUSIONS

Family, TV, and social media were the settings and channels through which adolescents received information about the COVID-19 vaccine. Interviewees were in contact with both anti-vaccine communications and official pro-vaccination campaigns and analyzed the reliability of such information. They formed their own opinion, regardless of their caregivers, with whom they did not always agree. In turn, they were not always involved in the decision to be vaccinated.

The reasons for not being vaccinated were hesitancy, a low perception of the risk of getting COVID-19, fear of needles, and administrative and geographic barriers.

The results suggest that communication strategies targeted at adolescents are required that encourage their involvement in access to vaccination and healthcare practices.

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Supplementary material available at: https://www.sap.org.ar/docs/publicaciones/archivosarg/2024/10281_AO_Santomaso_Anexo.pdf

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