No need for the needle. A qualitative analysis of the antivax movement in Romania

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Abstract

The antivax movement is now a constant phenomenon with increasing social implications. This study explores how the antivax movement is articulated in Romania on the basis of qualitative analysis applied to interviews. Our pilot study focuses on the opinions of 100 persons who oppose vaccination interviewed between 2017 and 2020. We conducted both face-to-face and online semistructured interviews to trace the factors determining attitudes against vaccination. To the best of the authors' knowledge, this is the first such extended study to target individuals rather than groups or media discourse. We strive to provide a multifaceted view on how the antivax phenomenon is taking shape. Responses varied in style and length, so we needed to systematize the narratives. We filtered the answers using the interpretive net described by Entman (1993), thereby grouping the main narratives into four sections. We then reconstructed the implicit frames used by individuals in interpreting their position. We consider content quality analysis to be a relevant method to reveal the facets and depth of the antivax phenomenon, thereby enabling more complex explanations. We compare the results of this study with rationales stemming from similar investigations conducted around the world and then highlight opinions specific to the Romanian public.

Keywords

Qualitative analysis; Vaccines; Anti-vaccines; Anti-vaccination; Antivax; Movements; Vaccine hesitancy; Interviews; Opinions; Responsibility; Health; Communication; Media; Conspiracy theories; Disinformation; Misinformation; False information; Hoaxes; Romania.

1. Introduction

Disputes on the topic of vaccination have become increasingly frequent. Families, doctors, scientists, social media groups, nongovernmental organizations (NGOs), the mass media, and even governments have become involved in these ongoing debates regarding where to draw the line between coercion and autonomy in public health matters.

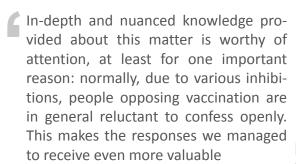
It is recognized that "immunizations are challenged and refused in many parts of the world" (Ratzan, 2011). Indeed, current research indicates that "vaccine refusal has been a recurring story in the media for well over a decade" (Smith, 2017), clearly presenting a competition between "pro- and anti-vaccination views" (Johnson et al., 2020).

More nuanced attitudes regarding vaccines also appear, for example, the "fence sitters" (undecided or neutral people regarding conflictive issues) identified by Rossen et al. (2019): "Compared to accepters, rejecters and fence sitters exhibit a heightened moral preference for liberty (belief in the rights of the individual) and harm (concern about the wellbeing of others)."

In turn, Vulpe and Rughinis (2021) defined three belief configurations linked to vaccination, viz. the hesitant, confident, and trade-off clusters, with the latter "combining beliefs that vaccines are effective, well tested and useful, with perceptions of probable vaccine damage."

Compared with vaccination supporters, opponents of this medical practice are much more vocal, while mainly using Internet resources to a maximum degree, in particular social networks (Dubé et al., 2015; Fadda et al., 2015; Ortiz-Sán-

chez et al., 2020; Pinazo-Calatayud et al., 2020) and the YouTube platform (Lahouati et al., 2020). Studies to date have revealed that "social media may have a role in spreading anti-vaccination ideas and making the movement durable on a global scale" (Smith; Graham, 2017). Such messages are "spread across many more Facebook clusters than are those from the larger pro-vaccine groups" (Ball, 2020). It appears that social media determine vaccine hesitancy, if not outright opposition to vaccination (Broadbent, 2019), and even prevent acceptance of vaccination against Covid-19 (Burki, 2020).



1.2. Antivax actors around the world and in Romania

The history of antivax attitudes coincides with the introduction of mass vaccination against smallpox, in the 1800s in England (Wolfe; Sharp, 2002). Social reactions against vaccination range from small protests to parliamentary debates and reports at scientific forums, including specific publications dedicated to this cause. The movement seems to have receded for a few decades, between 1940 and 1980, only to be revived again by "media permitting widespread dissemination of poor science and anecdotal claims of harm from vaccines" (Poland; Jacobson, 2011). A more recent factor catalyzing the antivax movement seems to be "the 1998 publication of an article, recently retracted by the Lancet, by Wakefield et al. [which] created a worldwide controversy over the measles-mumps-rubella vaccine by claiming that it played a causative role in autism" (Poland; Jacobson, 2011).

A 67-country survey carried out in 2016 showed that the highest levels of vaccine skepticism regarding their safety and importance were reported in Europe, particularly in Eastern and Southern European countries (Larson et al., 2016). In Romania, there is no law making vaccination compulsory, so activities against vaccination are not opposing an act per se but rather a practice that was taken for granted by the majority, until recently. Since 2016, the clamor in favor or against vaccination has become ever louder in the Romanian new media (Mureşanu, 2019). The dominant narratives used to support vaccine refusal in Romania were highlighted in an online content analysis by Toth (2020).

On Facebook, there are about 20 Romanian groups, of which 5 are private and 15 are public. Among these, in Table 1 we list those with titles making explicit reference to vaccines and vaccination, with over 1,000 members, or, in the case of public groups, over 1,000 followers.

Table 1. Romanian vaccine-related groups on Facebook

Name	Translation	Туре	Creation date	Members
Vaccinuri - Cunoaste Riscurile	Vaccines – you should know the risks	Private	March, 6 th 2015	26,300
Anti Vaccinari, Carduri, Globalizare	Anti-Vaccination, Cards, Globalization	Public	2015	2,800
Impotriva vacinarii fortate	Against Forced Vaccination	Public	2016	3,300
Rationezi sau Vaccinezi?	Reason or Vaccination?	Private	2018	1,500
VaccinEdu - Citeste Prospectele	VaccineEdu – Read the Package Leaflets	-	2018	20,897 followers

Meanwhile, political debates, printed publications, or extended coverage of the subject on Romanian television are scarce, although we note the study called "Public opinion on vaccination, its influence and its obstacles to increasing the immunization of the population" (**Zodian**, 2019). In that work, it was shown that TV shows (78% of them), radio shows (41%), websites of online publications (30%), and physical newspapers/magazines (16%) were perceived as being pro- rather than anti-vaccination (Zodian, 2019).

This study provides clear and coherent antivax opinions with concrete discursive sequences taken from interviews. This will further provide researchers interested in the phenomenon and private or state agencies with an extended and nuanced overview of their respective public

2. Methodology

Our pilot study analyzes the ways in which the opinion of 100 persons who oppose vaccination, interviewed by us between 2017 and 2020, were being shaped. We conducted both face-to-face and online semistructured interviews to trace the factors determining their attitudes against vaccination. Although the number of 100 individuals may not be considered representative of the larger population, we believe that the in-depth and nuanced knowledge provided about this matter is worthy of attention, at least for one important reason: normally, due to various inhibitions, people opposing vaccination are in general reluctant to confess openly. This makes the responses we managed to receive even more valuable.

The questions asked were formulated based on our hypotheses regarding the most probable motives influencing opinion generally and antivax opinions in particular. We thus asked the interviewees six questions:

- 1) How did you arrive at the decision of not letting your children be vaccinated?
- 2) What sources of information (online, books, scientific articles, media reports) have contributed to your decision?
- 3) Have the experiences of relatives, friends, acquaintances confronted with nuisances after vaccination etc. contributed to the strengthening of your decision?
- 4) What do you think about herd immunity?
- 5) What do you think about the manner in which this subject is reflected in mass media?
- 6) What is your relationship with your children's pediatrician?

The subjects were members of antivax Facebook groups. We contacted them by Messenger and asked them to answer these questions. They were mainly young parents (25-40 years old) from urban areas, and almost all with university education.

Naturally, the responses varied in style and length, so we needed to systematize the narratives. We filtered the answers by using the interpretive net described by **Entman** (1993) and thereby grouped the main narrative into four sections:

- 1) How do people name the main determinants of their decision? (defining the problem, in Entman's terms);
- 2) How are people relating to others' opinions on the subject? (diagnosing causes);
- 3) What moral judgments do people associate with the subject? (making moral judgments);
- 4) What do they recommend as measures of sustaining public health? (suggesting remedies).

Briefly, we thereby reconstructed the implicit frames used by individuals in interpreting their position on this theme.

This work may serve to address at least three important objectives. First, it could be of interest from a purely theoretical point of view to those who wish to compare similar situations from Europe or worldwide with the Romanian case. Secondly, this study provides clear and coherent antivax opinions with concrete discursive sequences taken from interviews. This will provide researchers interested in the phenomenon and private or state agencies with an extended and nuanced overview of their respective public. Finally, this work could be used as a starting point for future research that could enlarge and deepen the knowledge about antivax movements.

3. Results

3.1. Defining the problem

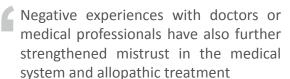
Mistrust in vaccines as grounds for the decision against vaccination is being fueled by four commonly embraced narratives:

a) Vaccines are not safe and do not offer 100% protection against diseases:

"I found out from documentaries, short films and books that vaccines are not efficient anyway (a person that has been vaccinated against hepatitis B can continue to be contagious for several weeks in a row); vaccines are useless at the wrong age (hepatitis B is transmitted through blood or sexual intercourse, which does not apply to children). I also learned about cases where the person gets the disease they have been vaccinated against, right after the vaccine;"

"To me, the most shattering news was that vaccines do not offer 100% protection against a disease and they only give partial immunity;"

"I found out vaccines were not 100% safe and that they hamper the immune system's normal development, which is only built up in the confrontation with the disease."





b) Negative experiences with doctors or health professionals, resulting in mistrust toward them and an adamant decision not to accept vaccination:

"So, I do not trust the doctor's involvement in the patients' well-being. Every decision belongs to me, as a mother, as a parent";

"I have been through many situations on the edge with my health and I have lost confidence in the health professionals";

"We do not have a stable pediatrician, and this because we haven't been able to find one to treat the child based on causes and not on effects".

Besides, the too few study hours dedicated to vaccines in medical schools are just another relevant reason:

"We were astonished to find out that in all countries, of the thousands of hours of study in medical schools, the lessons about vaccines merely take about two pages of information".

Presumed financial interests of doctors strengthen the parents' mistrust in the honesty of the medical service:

"I am coming to see you, doctor, because I have no other choice, I know you will recommend me five useless medicines, that are probably bringing you a percentage from the sale."

c) Major political interests:

"When a free treatment/medicine (like vaccination), promoted for its benefits, is imposed by force, through fines and constraints, then it stirs up much suspicion and wondering";

"Personally, I tend to believe in the conspiracy theories, I believe we are being intentionally harmed, and then this is just the right means to do it."

"Financial interests come before people's health."

The same idea is shared by a doctor himself:

"I am not totally against it. Sometimes there is a case for vaccination, but good judgment is always needed. Personally, I feel they are just too abruptly put forth."

d) Alternative medicine represents a solution for those who have refused vaccination, and who have lost their faith in allopathic medicine:

"I started treating myself and giving up medicines one by one, because I was in a situation where they nearly killed me with their medicine out of ignorance";

"After many problems in the ear-nose-throat department, I have given up allopathic medicine in favor of homeopathy, therefore the decision not to vaccinate came only naturally";

"I have been to several pediatricians, yet they have all recommended vaccination, and it is useless to discuss any further, because at the time being I trust none of them."

3.2. News about vaccination is mistrusted

3.2.1. "The press is one-sided"

Opinions on the way in which the topic of vaccination is presented in the media show that the media are rather one-sided, because

"they speak almost nothing about opponents of vaccination," and this attitude is actually "defying the very purpose of their existence, that of being neutral providers of information to the public."

Likewise, as interviewees complain, the media only shows benefits of vaccination:

"the mass-media are only presenting advantages of vaccination, hushing up about risks." Issues around the topic of vaccination are "almost nonexistent, or at least presented one-sidedly."

Moreover, there are no serious debates hosted by the media about vaccination, and if ever, they are placed in a too emotional light,

"without a real discussion based on arguments and evidence." It is considered that "an unfavorable light is being shed upon people who support the opinion that current vaccines are dangerous."

"In the mass-media, the pro-vaccine approach is presented as being the normal one; there is manipulation with news on epidemics of measles, specter of deaths, gross manipulation and journalists and the media being dominated and controlled by those who make laws to the detriment of the Romanian people."

Our study could be of interest from a purely theoretical point of view to those who wish to compare similar situations from Europe or worldwide with the Romanian case



One interviewee is convinced that, in the media,

"misinformation or half-truths are used, in order to influence the consumers' subconscious regarding the so-called importance of vaccination."

3.2.2. "The media are promoting pharmaceutical interests"

One idea that is frequently invoked by vaccination opponents is that the press promotes pharma interests:

"The mass-media are representing the 'Big Pharma' interests and the organized crime behind them, and not the truth."

The TV channels' discourse is considered to be

"Aggressive. Very aggressive. Deceitful."

The media are suspected of selling their pro-vaccination coverage for large amounts of money:

"I believe TV channels and newspapers have received a heap of money, and in exchange they have been told: do this!"

Another conviction emerging from the statements of opponents to vaccination is that

"The mass media are the greatest manipulator of all. Considering that the pharmaceutical industry is a monster, it is obvious that we are talking here about big money."

3.2.3. "The press is being paid to manipulate by fear"

The opinion that dominates the discourse of vaccination opponents is that

"The press is paid to manipulate by fear."

It is considered that the pro-vaccination news is meant to

"scare the parents and are aggressive in language."

The media are doing nothing else but showing

"the benefits of vaccination and the pretended risk emerging from a refusal to vaccinate."

The informational imbalance is revealed by opinions referring to the fact that the messages in the media are

"aimed at alarming, and not at providing correct information," and the manipulation is meant to "inoculate the fear of disease or death."

3.3. Diagnosing the causes

3.3.1. Dangers of vaccination; convictions about negative effects of vaccination

Parents' comments on vaccine safety refer to procedures, ingredients of serums, and adverse reactions. In this respect, one person believes that

"the content of vaccines is toxic", because they contain "aluminum, mercury, formaldehyde, that have made many children sick and even killed them."

Another interviewee said that the effect of childhood vaccines was nil:

"I did not get rid of the childhood diseases against which I was vaccinated."

Vaccines and their adverse reactions, as they appear in descriptions, raise problems:

"After my first son's 6-month vaccination I read the package leaflet, and we have ever since been inquiring and following publications of new studies."

Interviewed persons consider that vaccines

"produce autism and poison the nervous system," "cause lactose intolerance," and "determine severe apnea."

Other respondents said:

"I have met other persons convinced that vaccines can cause serious malfunctions in the body";

"I truly believe it, that the more vaccines are administered, the sicker people appear";

"From my experience, unvaccinated children are healthier than the vaccinated ones, look, here is a comparative study";

"We do not know how much these vaccines are weakening your immunity, rather than strengthening it."

3.3.2. Experiences of others as grounds for shaping convictions against vaccination

Individuals' opinions toward vaccination take shape in different types of social network (Shi et al., 2017). Exchanging ideas with people concerned about vaccination creates a fertile ground for convictions about the dangers of vaccines:

"Discussions with fellow workers, mothers, who shared with me their experiences with their own children after vaccinations."

Somebody confessed that they decided not to vaccinate their children

"due to the situations I heard about in my circle of friends, unwanted situations when as a result of vaccinations, our friends' children came to harm."

Some others say that they

"have met cases of children affected by vaccines, close cases from our near circle of friends. So, I have come to study this aspect better, so as not to regret later that I blindly trusted the doctors from here."

The decision to refuse vaccination may come after more and more people are speaking out about the risks of vaccines:

"I started hearing around me about the dangers of vaccination,"

somebody told us, firmly convinced that her friend's two children were made ill by vaccines:

"I have a friend with two children who were vaccinated in their first months of life, and they ended up in wheelchairs. They were healthy just until the vaccines. One child lived 8 years in a wheelchair, and the other 14 years."

Somebody else said that

"another cousin's girl is 6 years old and cannot walk, cannot see, she can merely glimpse."

Another source is a distant relative:

"My brother's godmother has a child who went through anaphylactic shock a few hours after the vaccine."

Close friends report adverse reactions after vaccination:

"a good friend of mine has a child who got autism after the MMR vaccine."

There are similar cases indicated by relatives:

"I have a little niece, who at 6 months of age was vaccinated, and this affected her brain, she has become a vegetable. She is now 8 years old and is in a really bad condition."

Decisions to reject vaccination have also come from

"experiences of fellow workers and friends from online groups."

Another interviewed reveals an event involving the child of some friends, that brought about a very strong opposition against vaccination:

"he was a normal child until one year of age, but after the MMR vaccine, he changed completely; from the joyous child, that slept well and laughed all day, all of a sudden they ended up with



a cranky child, crying hysterically day and night, and having stopped laughing, all these beginning with the night after the vaccine. They were not able to calm him at all. They did not know what was going on, and then later they thought that it might have a connection with the vaccine, so their godmother started gathering information, and found all the symptoms of the adverse reactions in her child's behavior. Then she started searching and reading."

Experiences of others are a very powerful source of influence. Healthcare providers exert much less influence than do close social contacts (family, friends, coworkers, etc.). Their experiences act as warnings and are used as lessons learned from others' experiences, leading to firm refusal of vaccination:

"About a year and a half after I gave birth, I heard from a neighbor of my mother's, who has a boy born in 1983, that he became autistic after a vaccine at the age of 9 months, and this has somehow shaped my decision."

3.4. Evaluating the moral aspect

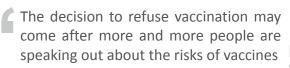
We are dealing here with the moral evaluation of the act of vaccination by people who are not directly involved in making general decisions. We have seen that their views usually imply principles of moral evaluation in the social, political, and economic fields. These principles are found to cut across all responses, and we have tried to make them evident. But in our investigation, there was a particular tendency toward moral weighting of one particular presumption underlying vaccination, that is, the perspective on herd immunity obtained through generalized vaccination.

At present, herd immunity is taken by many medicine professionals to be the main objective of vaccination (Mallory et al., 2018). However, the concept of "herd immunity" is poorly understood by most of the interviewees and is oddly connected with the principle of law by those who declare to understand it.

3.4.1. Herd immunity versus natural immunity

Some interviewees chose to balance herd immunity resulting from vaccines with naturally acquired immunity.

> "Herd immunity can be only natural immunity," maintained one of them.





A recurring pattern in answers was based on the idea that those vaccinated should not worry about those not vaccinated:

"I cannot understand how a vaccinated child might catch the disease from a child not vaccinated."

The same pattern is detectable in answers like these:

"I do not understand why the vaccinated are afraid of those not vaccinated";

"Why a group of vaccinated children, the ones that theoretically are protected, would fear the presence of an individual not vaccinated?"

The two most frequently cited arguments are:

"While initially we were told that vaccinated children are protected, now they insist on herd immunity. If you vaccinated your child and he is protected, then what business do you have with the others?"

"If vaccines are really efficient, you do not need the fascism of vaccinating the whole population."

And a most surprising formulation of the problems linked to herd immunity corresponded to a family doctor, who stated this during an interview:

"Herd immunity... You know, let us put it this way. I do not use this kind of language. I mean I have got rid of the wooden language, to call it that."

Most of the respondents tended to oppose the idea of herd immunity in terms ranging from circumspection to raging condemnation. First, there were people saying herd immunity was simply "a myth," "a nonsense," "contradicted by reason." A somewhat more moderate position was held by two interviewees, one of them stating that "[herd immunity] would be good, but it looks like utopia" and the other characterizing it as "an invention of the marketing departments of pharmaceutical companies." One person declared that "we gain immunity by a healthy diet."

The harshest criticism was articulated in terms like "a stupidity." The accusations culminated in political denunciations such as "it sounds like a tyrannical idea, a socialist-communist one" and "a Nazi law project."

3.4.2. Philosophical arguments

A particular kind of argument stemmed from quasi-philosophical points of view:

"The uniqueness of the person as a whole excludes the term 'herd immunity'";

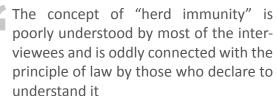
"So this thing with herd immunity does not work and I cannot go with the herd because my opinions are different from those of the herd, so this is out of the question."

Another point of view was

"I think that mass vaccination is harmful, because not all the children need vaccination. I do not consider vaccination a bad thing, but I reject the abuse and the constraints on the freedom of choice."

3.5. Recommendations made by interviewees

Most recommendations were aimed at improvements to the medical world, of which the most far-reaching, addressed to doctors, researchers, or pharmaceutical institutions, was for them to take responsibility for any possible serious post-vaccination afflictions. Medical professionals are urged to perform continuous research on the safety of vaccines, and also to acknowledge the

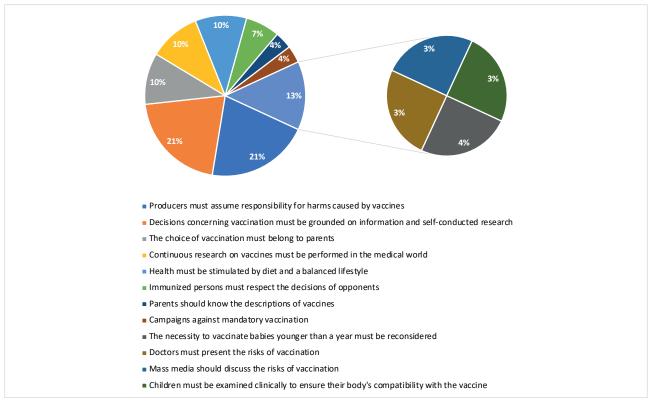




importance of clinical anamnesis before inoculation. Another recommendation made by our interviewees was for parents to receive sufficient information before they decide to vaccinate their children, plus other recommendations for authorities or other social actors to give legal authorization to parents in their decision about their children's immunization through vaccines.

3.6. Antivax arguments identified in the interviewees' answers

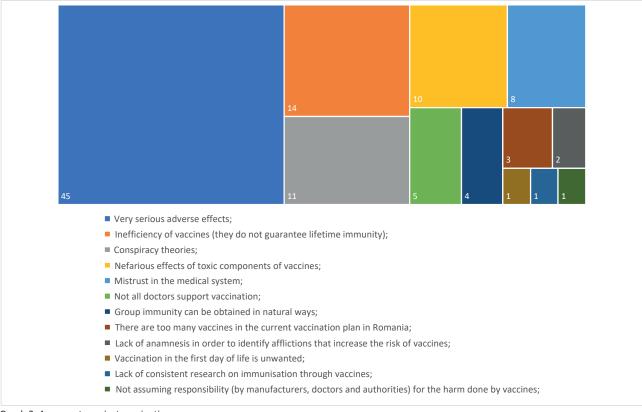
Graph 2 reveals that more than one argument underlying the decision not to vaccinate could be deduced from the answers of some interviewees.



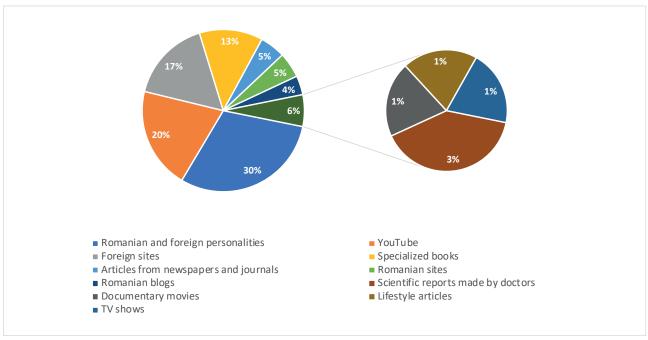
Graph 1. Recommendations made by opponents to vaccination

3.7. Interviewees' information sources

In answering the question "What sources of information (online, books dedicated to the subject, scientific articles, media reports) have contributed to your decision?" interviewees stated that their sources were books, foreign websites, as well as Romanian websites and blogs, *YouTube* recordings, documentaries made by doctors and Romanian and foreign opinion leaders, articles on science and lifestyle, and TV programs.



Graph 2. Arguments against vaccination



Graph 3. Information sources of opponents of vaccination

4. Discussion and conclusions

Opponents of vaccination in Romania consider that articles, books, and audiovisual materials, which they read, are a result of serious scientific research. Xu et al. (2019) noted that the readability levels of antivax articles could enhance the persuasive effect of their messages. Their Healthcare providers exert much less influence than do close social contacts (family, friends, co-workers, etc.)

vaccination skepticism is consolidated by information coming from organizations that more or less openly express their views on this topic, basing them on principles such as risk-benefit assessment, civil rights, informed consent, autonomy in medical decision-making, and responsibility of manufacturers, doctors, and authorities. It seems clear that "vaccine hesitancy presents a significant challenge that will require a multidisciplinary approach" (Kestenbaum; Feemster, 2015). One step in this direction was a study conducted by Cuesta-Cambra et al. (2019) on the visual and emotional patterns of pro- and anti-vaccination followers of internet sites and social media.

Manifestations of mistrust or fear against preventive vaccination are fueled by a dominance of opinion and disregard for expertise, a phenomenon that Collins and Evans (2008) call "scientific populism." The paradigm of the relationship between individuals and experts brings with it two tendencies: an accentuated perception of risk, defined by Giddens (1990, p. 125) as "the menacing appearance of the circumstances in which we live today" and a weakening confidence in technical-scientific, including medical, expertise. A recent study showed that social media may contribute to the mistrust the public has for healthcare providers (**Dhaliwal**; **Mannion**, 2020).

One particular point one should emphasize is the perception that people have on the herd immunity phenomenon, which is either poorly understood or simply ignored. We feel this may be a symptom of social antagonism, with health professionals on one side and "consumers, informed and empowered [who] have the right of choice... so why not here?" on the other side, as it has been argued" (Blume, 2006). The same kind of tension was underlined by Aparici and García-Marín (2018) when discussing prosumers and emitters-receivers (emirecs) aiming at delegitimizing the dominant discourses of the main actors in the health system. Ultimately, this is a conflict between deontic and epistemic authorities (Bocheński, 1979) that seems impossible to address via a sort of democratic compromise. Public health representatives claim the "power of science," while antivax opponents are deeply distrusting of what they perceive as a "science of power" exerted by governments, Big Pharma, and doctors. A proposition for justified individual waivers has

been advanced by Hussain et al. (2018), while Jacobson et al. (2015) suggest specific strategies and techniques to bypass vaccine hesitancy, one of them being the use of presumptive instead of participatory language when doctors discuss vaccination with parents (Jacobson et al., 2020). To improve confidence in vaccines, Bednarczyk considers that

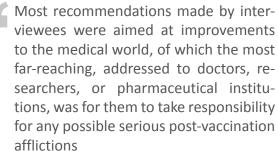
> "research should be directed more carefully to specific groups, including parents of young children" (Bednarczyk, 2018).

Most of the respondents tended to oppose the idea of herd immunity in terms ranging from circumspection to raging condemnation, characterizing it as "a myth," "a nonsense," "an utopia", or "an invention of the marketing departments of pharmaceutical companies"



Regarding the communication tactics that may be used, it appears that factual information regarding contagious diseases may be more efficient than attempts to undercut myths about vaccination (**Horne** *et al.*, 2015).

The majority of the arguments highlighted herein are in accordance with those identified in a series of articles concentrating on the online activity of antivaxxers (**Davies** *et al.*, 2002; **Barbacariu**, 2014; **Volkman** *et al.*, 2020). A 24-nation study revealed a high level of disgust toward blood and needles (**Hornsey** *et al.*, 2018). A simi-



lar study of 29 interviewees was conducted in 2017 in Australia (Ward et al., 2017).

Notwithstanding, we may mention five distinct reasons invoked by our respondents regarding medical research and practice in the field of immunization:

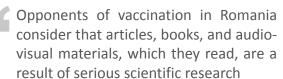
- there are too many vaccines in the current vaccination plan in Romania;
- vaccination on the first days of life is undesirable;
- the lack of consistent research on immunization through vaccines;
- the lack of anamnesis to identify afflictions that increase the risk associated with vaccination; and
- the avoidance of responsibility by manufacturers, doctors, and authorities for harm done by vaccines.

Our findings reveal that the interviewees believe that vaccines have very serious secondary effects and do not provide 100% protection against diseases. Negative experiences with doctors or medical professionals have also further strengthened mistrust in the medical system and allopathic treatment, while both the press and some authorities' representatives have their own economic interests in promoting the benefits of vaccination, glossing over any attempt at discussion over risks. Moreover, we found that the trust people have in other parents that reject vaccines, even if they do not know them personally, is greater than their confidence in the medical system, hence the need for individual information and documentation on the topic of vaccination poignantly perceived by respondents.

These opinions demonstrate the need for physicians to listen to patients' concerns and build confidence in vaccines, as endorsed by **Williams** (2020) and **Swingle** (2018) through "savvy communication" focused on understanding vaccination-related concerns (**Suk**, 2010). One solution would be "to communicate vaccination as a social action" (**Brockmann**, 2017) rather than an individual one, "to improve vaccine acceptance at the population and individual patient levels" (**MacDonald** *et al.*, 2018) and identify new strategies to address vaccine hesitancy (**McClure** *et al.*, 2017).

A general idea that one can extract from the answers collected in this study is that the degree of distrust in vaccines could be reduced by increasing public awareness of efforts made by producers to ensure vaccine safety as well as a serious examination of the link between vaccination and some serious diseases. Mistrust in the benefits of vaccination and

the hazards seen as prevailing over these advantages are the main reason for the interviewed persons' refusal to vaccinate. The interviewees' main recommendation and request is addressed to vaccine producers, urging them to take responsibility for the harm done by their vaccines.





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