"The Right to Our Own Body Is Over": Justifications of COVID-19 Vaccine Opponents on Israeli Social Media

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Abstract: Vaccines decrease morbidity and mortality. Nevertheless, their benefits depend on public response. During COVID-19, vaccine hesitancy and refusal were rampant, threatening public health. A thorough understanding of opponents’ arguments is required to address the diffusion of unreliable information on social media and prevent vaccine hesitancy from developing into vaccine refusal. The focus on the opponents’ viewpoints and their justifications makes the study unique. Accordingly, textual content analysis of reader comments on three health-related Israeli Facebook pages was conducted. Data collection encompassed the Israeli COVID-19 vaccination period from October 2020 to May 2022. The comments were analyzed according to the health beliefs model (HBM). We found that vaccine opponents were characterized by low perceptions of the severity of the disease combined with high perceptions of the damages of the vaccine; low perceived benefits of vaccine compliance; vaccine hesitancy and fear along with public distrust as barriers to change; and call for action to resist the vaccine and spread related anti-establishment views on the web. Hesitancy was found to develop into public distrust in the state systems and escalate into conspiracy beliefs and anti-vaccination activism. These results are important and instructive that early detection is necessary to prevent future vaccine resistance.

Keywords: vaccine hesitancy; vaccine opponents; COVID-19; public trust; health behavior; health beliefs model (HBM); social media; reader comments; Israel; conspiracy theories

1. Introduction

Vaccines form an important element in preventing morbidity and mortality and in promoting public health [1,2]. They have a significant role in improving quality of life, restricting the distribution of infectious diseases, preventing disabilities, and saving lives [3]. However, despite the huge progress in vaccine development over the past century, public cooperation is needed in order to maximize vaccination benefits, accomplish herd immunity, and prevent outbreaks of preventable diseases [2–4].

This aspect creates difficulties because, alongside the development of vaccines, vaccine hesitancy and refusal are rampant [5–9]. Many people are reluctant or even refuse to be vaccinated, viewing vaccines as unnecessary or unsafe. This represents a serious threat to public health [10,11] and interferes with the ability to treat COVID-19 [4,12]. Thus, this presents an important public concern that deserves further study.

To understand the motivations behind COVID-19 vaccine hesitancy and refusal, the current study applied the health beliefs model (HBM) [13,14], which served as the analysis theoretical basis. The model suggests that individuals will take a particular action regarding their health based on their beliefs and perceptions. It is divided into five components: perceived susceptibility to the disease; perceived severity of the disease; perceived benefits of preventative action; perceived barriers to preventative action; and health motivation (urge for action) [1,13–15].
Various elements have contributed to the rise in vaccine hesitancy and refusal during the COVID-19 pandemic. These elements include common reasons such as fears regarding vaccine safety, religious beliefs, philosophical principles, and the wish to receive additional information about the vaccines. In addition, during the COVID-19 pandemic, anti-vaccine attitudes spread rapidly also because of the urgency that was created in the process of developing a new vaccine [16]. COVID-19 raised vaccine hesitancy due to the vaccines’ innovative character, lack of information regarding their safety, the use of accelerated protocols to approve them, and, accordingly, fears regarding side effects that could be discovered with time [6,7,17].

Israel provides a particularly illustrative example in this context, as it was among the first countries to start vaccinating against the disease. In March 2020, following the global COVID-19 outbreak, the World Health Organization (WHO) declared it a pandemic [18,19]. A few months later, in December 2020, Israel started to vaccinate the population [1,7]. The vaccine was initially given to the elderly population (60 and above) and to medical personnel and then gradually to younger age groups. By March 2022, 66.5% of the Israeli population had been vaccinated twice, 48.6% had been vaccinated three times, and 8.2% had been vaccinated four times [1]. According to the Israeli Ministry of Health (MOH), the vaccination rates among the Jewish population were even higher, with 86% receiving at least one vaccination by February 2021, as opposed to 51% among Arabs [7].

However, parallel to the high vaccination rates, Israel also experienced manifestations of vaccine hesitancy and refusal, as was the case in other countries [20]. Alongside the barriers that were mentioned above, vaccine hesitancy and refusal were fueled by conspiracy theories, which deepened the public distrust in the healthcare system. As mentioned by Jennings et al. [21], trust is crucial to ensure compliance with public health measures and can be affected by the distribution of uncertain and unstable advice, which is becoming common in the spread of conspiracy theories [21,22]. Conspiracy theories tend to blame the authorities for concealing vaccines’ side effects, denying full information from the public, hiding covert relationships with firms that profit from vaccine distribution, or spreading unreliable and outdated information. These perceptions are often based on information presented on general websites and social media platforms, where people are exposed to unprofessional, unreliable, and misleading information [8,21–23].

That way, vaccine hesitancy and rejection are related to belief in conspiracy theories and to the search for information in social media networks [8,21,22,24,25]. The literature highlights the influence of social media on decision-making regarding vaccination [9,22,26] as social media platforms became a common source of health information [21,27]. As shown by Kata, already in 2012, anti-vaccine posts provide biased scientific information, political arguments focusing on freedom of choice, opinions that express distrust of the medical community, conspiracy theories, and personal information related to negative vaccine experiences [28]. Compared with traditional media channels, social media allows the distribution of unvalidated ideas and messages and unfounded data that could easily be presented as “scientific” [16,29,30]. Accordingly, as mentioned by Garett and Young (2021), anti-vaccine posts may facilitate anti-vaccination behavior [22]. Moreover, studies have shown that false information spreads through social media even faster than verified data. For example, an examination of anti-vaccine arguments that were posted on Twitter and Facebook found that emotional tweets and posts could be more meaningful than epidemiological testimonies [29].

These aspects, along with the prevalent use of social media platforms by vaccine opponents to share their worldviews [16,22], indicate the importance of studying the discourse on social media and the justifications vaccine opposers use. As for the focus on the COVID-19 vaccines, although the pandemic is officially over, it is essential not to forget the lessons that can be learned from it for similar future cases [31]. For this reason, the current study analyzed the justifications used by Israelis who have decided not to be vaccinated and who spread their anti-vaccine attitudes via social media. These justifications were analyzed according to the health beliefs model (HBM) [13,14] which
The study aimed to identify types of comments representing the anti-vaccination stance. The research question was as follows: What are the main justifications for opposing the COVID-19 vaccine, as seen in readers’ comments on social media?

Previous studies have shown the influence of public knowledge about COVID-19 on people’s tendency to adopt and apply government guidance [9,32] and searched for an understanding of the reasoning behind vaccine hesitancy and refusal [17]. These studies, mostly quantitative, have examined the relationships between the perceptions and knowledge prevalent in the population, the sources of information, and vaccine hesitancy [9,17,21,32,33]. They have shown a significant relationship between the knowledge about COVID-19 and the perceived severity of the disease and highlighted the impact of disseminating reliable knowledge on public attitudes regarding vaccination [9,17,22,32,33]. However, they are limited in examining the characteristics and kinds of information and knowledge the public meets. The current case study aims to present this information by examining vaccine opponents’ justifications on social media. The study aims to examine what characterizes the positions, attitudes, and worldviews of individuals opposed and hesitant to vaccines in practice. This aim requires a qualitative study, which can examine the types of justifications and explanations vaccine opponents give.

As previously mentioned, Israel’s early vaccination efforts provide a unique opportunity to examine the population’s reactions to vaccinations. Our research innovation is focused on analyzing responses written during the outbreak of a new epidemic, highlighting the meanings given by people and their perspectives on dealing with and fighting against it. The research also explores how social media amplifies these ideas and spreads vaccine reluctance. This aspect is particularly crucial, as it provides insights into digital public health communication dynamics, a growing and important field in our increasingly connected world.

2. Materials and Methods

This study examined the justifications used by vaccine opponents in Israel when they spread their vaccine refusal stance. To document and understand these justifications, we conducted qualitative social media content analysis [34]. We chose Facebook as the online platform from which we collected readers’ comments due to the active discussion regarding vaccination on this platform. We will present the three Facebook pages from which we collected comments and the reasons for choosing them. Then, we will present the research method and research process.

2.1. The Facebook Pages

To gather as rich and varied data as possible, we chose to analyze reader comments from three Facebook pages that reflect three different stances regarding vaccination. The first was the official Facebook page of the Israeli MOH, selected to examine comments relating to the official information provided by the state. A pilot study found that this page included comments both for and against vaccination and could serve as an adequate basis for documenting comments referring to the instructions and recommendations presented by the health authorities.

Two additional pages were selected to represent two ends of the spectrum between supporters and opponents of the vaccination policy. The first was the Facebook page of an NGO called Mida’at (“Informed”) [35], established before the pandemic for the purpose of making reliable scientific information available to the public; as such, it deals with health-related issues to “identify and correct misleading or incorrect information published in different media websites” [35]. The NGO dedicates much of its public activity to disseminating reliable information about vaccines and presenting scientific knowledge. Its website includes an information center regarding COVID-19, a link to a Facebook group...
called “Talking about Vaccines”, and information sources regarding childhood vaccinations, hygiene, and additional aspects of public health. The website features the slogan “Together we will end fake news: For a healthier society”, and on its homepage, it is written that “This is the first Israeli website that meets World Health Organization criteria and is included in the vaccine safety net” [36].

Finally, we examined talkbacks found on the Facebook page of a group called “The Israeli Public Emergency Council for the COVID-19 Crisis” (PECC) [37]. This is an independent association of doctors, researchers, and social welfare professionals who came together after the emergence of the COVID-19 pandemic to criticize the way the state managed the crisis. This group was opposed to the social distancing restrictions imposed during the pandemic and viewed the Israeli vaccination policy as coercive and violating people’s rights. According to the organization’s website, PECC was established by people who decided they could “no longer remain silent in the face of the manner in which the COVID-19 crisis is being handled” [37]. The website emphasized the presentation of information regarding the side effects of the COVID-19 vaccines and the negative consequences of the policy implemented for coping with the disease more generally. For example:

“If you have been affected by the government’s restrictions or believe that the COVID-19 policy compromises democracy, if you have experienced side effects following the vaccine and did not find a sympathetic ear, if you feel that you and your children are experiencing unfair pressure, if you believe that we must all get our lives and routines back, join us. Only if we unite can we return our country to a path of health and sanity” [37].

The data was collected from these three Facebook pages, with more resistance activities found on the first and third ones (MOH and PECC). On the PECC page, as expected, solid anti-vaccination positions were presented, including conspiracy theories and accusations of the healthcare system’s lack of reliability and transparency. Similar accusations were found also on the MOH page as an act of resistance to the page’s presentation of the authorities’ guidelines and recommendations. Compared with these two pages, on the page of Mida’at, there were fewer anti-vaccination comments.

2.2. Data Collection

We collected reader comments from the beginning of the vaccination operation in Israel in October 2020 until the end of most social distancing restrictions in May 2022. Within this range, we located comments on posts dealing with COVID-19 vaccines using the search terms “Corona” (the common name of the disease in Israel), “Corona vaccine,” and “COVID-19”. In total, comments were collected from 255 news items and posts (93 news items on the Facebook page of the MOH, 75 news items on the page of Mida’at, and 87 news items on the PECC page). All were written in Hebrew.

The data collection process included two phases. First, we collected all reader comments relating to COVID-19 posts. In each of the three Facebook pages, we randomly sampled posts that were published from October 2020 until May 2022. We worked with “post-filters”, sampling 1 month at a time (a total of 20 months). Two members of the research team surveyed separately each month, documenting five to ten posts per month based on the presence of one or more search terms (“Corona”, “COVID-19”, etc.) Then, from all these COVID-19 posts, we kept the ones that included a negative response, questions regarding vaccinations, or expressions of vaccine hesitancy or refusal.

2.3. Data Analysis

Once the relevant comments were identified, the members of the research team worked on the data analysis process, categorizing the comments into subgroups according to the principles of qualitative content analysis [15]. We started by individually analyzing the data. In this phase, each member of the research team went through the collected responses and divided them into subgroups of subjects (questions regarding the vaccinations’ safety, comments mentioning conspiracy theories, stories about vaccines’ side effects, questions
regarding specific populations such as pregnant women, etc.). After that, we held a joint meeting during which we compared the individual categorizations that each of us made and, after that, compared the themes and sub-themes with the typology of the HBM. That way, at the end of the analysis process, the reader comments were categorized based on HBM [38,39] and informed by the principles of thematic analysis techniques [31,40]. As mentioned by Gächter et al. [19], this dual-coding approach helped to minimize bias and enhance the reliability of the analysis.

2.4. Ethics

The use of empirical data appearing online creates ethical dilemmas and challenges related to participants’ privacy, informed consent, anonymity, and confidentiality [41]. For this reason, the analysis of reader comments was carried out only on publicly available Facebook pages. Moreover, the researchers analyzed the texts while preserving the writers’ privacy and without using any personal information, even when the writers themselves chose to reveal it. The study was approved by the Yezreel Valley College Ethics Committee (app. No. YVC EMEK.2023-12) and was conducted with attention to principles of privacy and anonymity.

3. Results

The findings below are presented according to the HB model, painting a complex picture of the uniqueness of the social phenomenon created by the COVID-19 pandemic vaccine opponents. Figure 1 describes the findings visually.

<table>
<thead>
<tr>
<th>Perceptions of Disease Damage</th>
<th>Perceptions of Disease Severity</th>
</tr>
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<tbody>
<tr>
<td>Low: “[The vaccine is] A greater threat than the virus”*</td>
<td>Low: “It’s only the flu with PR”</td>
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<tbody>
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<td>High: “...evidence about phenomena accompanied by direct injuries as a result from your shot”</td>
<td>High: “The hospitals are full of vaccine victims. You ruined people’s health and Life”</td>
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<tr>
<th>Perceived Benefits</th>
<th>Perceived Barriers to Change</th>
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<tr>
<td>Low: “Vaccinated people with the green note got infected, sick, spread, and infected healthy people!”</td>
<td>Fear and Distrust: “The drug industry is run like a giant corporation”</td>
</tr>
</tbody>
</table>

Urges for Action

Vaccine opponents and Spreading an anti-establishment stance: “Nothing will break us! ...The people of the Ministry of Health are invited to inject their children with whatever they want and our children to leave in peace”.

Figure 1. Research findings via HBM (1956).

Theme 1. “[The vaccine is] A greater threat than the virus”: Perceptions of Disease Damage.

This aspect represents individuals’ beliefs regarding the likelihood of contracting a certain disease or possible damage due to a particular health-related behavior or its avoidance [34]. An analysis of the texts demonstrates a low belief on the commenters’ part that they would contract COVID or that their health situation would deteriorate as a result. For example:
“If contagion were so great, we would already be with no transportation. Think about drivers who are so close to people when driving a bus. There are many questions in general regarding this” (PECC, December 2021).

Moreover, with the perception of a low likelihood of contracting the disease, there is an assumption that the vaccine, which had been approved in an expedited process with no long-term testing of its effectiveness and safety, could cause greater harm. The low level of fear of contracting COVID-19 and the high level of fear of the vaccine are apparent in the following comment:

“Over 100 lawyers have mobilized for the fight against child COVID-19 vaccinations, grounding their arguments in the medical professional basis PECC presented. They claim what we all know—there is no emergency situation in Israel; thus, we should not use a vaccine that had only received emergency approval. The vaccine presents a greater threat than the virus” (PECC, June 2021).

The wish to disseminate fear of the vaccine among the public is evident in “Testimonials Project”—The Movie, which appeared online several months after the beginning of the COVID-19 vaccinations [42]. It included segments of interviews with people talking about negative side effects following the vaccine. The film website, often linked to Facebook pages where vaccine opponents were active, presented it as follows:

“This testimonial project was conceived to provide a platform for all those damaged by the COVID-19 vaccine and give them a voice that Israeli media does not. We hope the project will encourage more and more people to tell their stories”.

A commenter who shared this film website wrote, addressing the MOH:

“It will do you no good, as there are so many testimonies regarding side effects and direct damage resulting from your injection that [they] will flood the country like a boomerang, a great tsunami; you cannot fight reality” (PECC, July 2021).

Theme 2. “It’s only the flu with good PR (public relationship)”: Perceptions of Disease Severity.

The HBM also relates to individuals’ perception regarding the severity of a disease or health-related conditions in terms of its effects on health and social life [39]. Content analysis regarding this aspect yielded two perceptions: the disease’s and vaccine’s severity. Among the commenters, the severity of the disease was perceived as low to non-existent (to the point of believing that COVID-19 itself did not exist). For example:

“An invented virus […] whose existence hasn’t been proven, and emotional assumptions with no factual basis. A group of irresponsible people, greedy and power-hungry, who can only create trash science covered up by cruel arrogance” (MOH, December 2021).

Another comment was written on the day of the official announcement by the MOH regarding the Omicron strain:

“There’s no morbidity and no Omicron. You invented a word to market the vaccine” (MOH, December 2021).

Moreover, even when short videos with testimonies regarding hospitalized patients and the destructive implications of vaccination refusal were uploaded, the readers’ comments often demonstrated extreme distrust in the authorities. For example, a post uploaded to the MOH Facebook page with a short video showing testimonies of medical personnel from the COVID-19 wards received comments such as the following:

“The lower public trust gets, the more you try to frighten the public to control it.”

“This disease is so dangerous that you must keep producing ads and campaigns. And I’m thinking—who are these zombies watching this today and swallowing this made-up video?”
“I’m watching the video and thinking that I no longer believe a single word you utter, Ministry of Health” (MOH, February 2021).

As suggested, there was also evidence of high perceptions of the severity of the vaccine’s implications:

“Enough lies. We don’t believe you. The hospitals are full of vaccine victims. You have ruined people’s health and their lives, not to mention the rise in mortality since the vaccines have been introduced. Ask the undertakers. I’ve read quite a few testimonies of people who had been hospitalized or whose families had been, reporting that the wards are full of vaccine victims” (MOH, May 2021).

According to BHM, the perception of disease damage, combined with the perception of disease severity, forms the perception of disease threat. An in-depth examination of the comments demonstrates a very low level perception of disease threat regarding COVID-19, along with high perceptions of the vaccine, which has become a separate threat focus.

“[…] In the fall or winter, they will continue vaccinating us. And it will be ten times worse. If they haven’t forced us to become annihilated until now, in two or three months, there will be a mandatory vaccination law and detention centers for the opponents. The same [Prime Minister] Bennet mentioned this once: “Recuperation Facilities” (PECC, August 2021).

The identification of vaccination with annihilation is deliberate, representing a heightened threat perception related to the vaccine rather than to the disease.

**Theme 3. “Vaccinated people with the green note got infected, got sick, spread and infected healthy people!” Perceived Benefits.**

This part of the model relates to the benefits of health-related behavior, as perceived by the individual, compared to the effort invested in changing that behavior [39]. Analysis of the readers’ comments regarding this topic demonstrates that many did not see any benefit in vaccinating. The morbidity waves reinforced this perception, which rose following vaccination periods, particularly between December 2021 and February 2022, when the Omicron strain broke out. Vaccine opposers perceived the Omicron wave as proof of the vaccine’s ineffectiveness, as despite a third vaccine round, the contagion waves did not subside:

“News flash . . . my children aged four and six have been positive since Sunday, completely non-symptomatic, and my husband and I, who have been vaccinated three times, are sick and symptomatic (MOH, February 2022).

This comment received many likes and supporting verbal responses, such as “It’s exactly the same for us!!!”.

Another expression of the low perceptions of vaccine benefits was the many negative responses to a MOH publication titled “The Green Pass is Life” (September 2021). The Green Pass, granted to vaccinated individuals, represented an attempt to create contagion-free environments by restricting entry to certain public places to pass holders. The pass allowed its holders freedom of movement while restricting non-vaccinated individuals. The latter’s responses were harsh, reflecting a deterioration in public trust. For example:

“The Green Pass is life?!?!?! You should be ashamed of yourselves. There’s no forgiveness for the crime you are committing!!! Life is eating right, breathing right, and not being under constant strain because there is a heavy cloud above you forcing you to participate in an experiment that received [only] emergency authorization!!! My uncle received three vaccines and infected half my family over the holiday, and they are not vaccinated . . . So how does the Green Pass help?!?” (MOH, September 2021).

Another respondent wrote the following:
“It seems that most vaccinated people with the Green Pass have gotten sick and passed the disease on to healthy people!! It’s a shame that you need another vaccine every six months, and it still doesn’t prevent contagion!!” (MOH, September 2021).

Another reader commented the following:

“In addition to driving people apart, there is nothing here! I know people who have all the vaccinations and have contracted the disease more than once and others who are not being vaccinated who never got it!! Both vaccinated and non-vaccinated people can pass the disease to others, so it’s completely unclear what’s behind all this nonsense you’ve said here” (MOH, September 2021).

These reader comments derive from learning and data collection processes rather than sheer ignorance. Thus, some vaccine opponents perceive themselves as knowledgeable and acting based on informed choice.

**Theme 4. “The drug industry is run like a giant corporation”: Perceived Barriers to Change.**

This aspect relates to perceived barriers to health-related behavioral change, which, when seen as significant, may prevent an individual from adopting the recommended behavior (in this case, vaccine compliance) [39]. Analysis of the reader comments exhibits two types of barriers—emotional and cognitive. Emotional barriers are related to fear of the new vaccine and its side effects. For example, this is a comment on a post encouraging vaccination:

“Facial paralysis, diarrhea, damage to the heart muscle, damage to the placenta for women, you’re liars, you’ll pay for this, shithheads” (MOH, December 2021).

Cognitive barriers are expressed through distrust of the establishment. This can be seen in people’s words, treating representatives of the political and healthcare establishment as criminals hiding information regarding the harsh implications of the vaccine. For example:

“I’ve met vaccinated people, seen side effects with my own eyes. I’m not getting vaccinated!!! I’m not your lab rat. Lying criminals” (PECC, September 2021).

Another comment on a post in Mida’at (May 2021) presented the often-repeated claim that citizens distrusted the authorities due to the feeling that no serious examinations had been carried out to ascertain the vaccines’ side effects:

“It’s really great that in Europe and the US, they stopped the vaccinations and checked. Here, despite cases of myocarditis, they didn’t stop anything to check. Also, regarding post-vaccination paresthesia, many doctors claim that it’s due to anxiety, and some still do. People would have gained more trust if the Ministry of Health had treated these phenomena properly. Also, pay attention to the fact that for two months, they didn’t post presentations of side effects”.

Another comment on the same post reads as follows:

“Is there any reason they don’t publish updates for the follow-up on post-vaccination side effects in Israel? The last report was published on March 1, 2021 (more than two months ago), and did not include a proper, separate, emphasized section regarding post-vaccination cardiac and neurological phenomena”.

Moreover, some of the readers’ comments related to the economic interests supposedly motivating the vaccination campaign stated the following:

“The drug industry is run like a giant corporation raking in billions and employing people who engineer our consciousness and fear who have taken over the media… and along the way, it manages to recruit little politicians who accumulate control and power over a weak, tired population… which is willing to take drugs only so they can feel free… even if it’s at the expense of the freedom to choose what to put into their bodies.” (PECC, April 2021).
A similar comment elsewhere read as follows:

“Unfortunately, the doctors have sold themselves to the government and the drug companies. I have no trust in you. There are more questions than answers regarding the disease and the vaccine” (MOH, February 2021).

According to the last two comments, distrust in the MOH system was related, among other things, to the perception that Pfizer and other pharma companies had “bought” doctors and MOH officials. Thus, the commenters were suspicious of doctors advising them to vaccinate. For example, in November 2021, the MOH uploaded a 24 s video showing a pediatrician talking about the claim that COVID-19 vaccination led to myocarditis. In response, a commenter wrote the following:

“Instead of putting a doctor reading from a prompter here, start publishing data. Prove that there’s no rise in the rate of cardiac cases among young people compared to previous years”. (MOH, November 2021).

Thus, whereas distrust was initially related to managing the COVID-19 pandemic in general, later on, the opponents perceived the vaccine as a tool for controlling the population and promoting economic interests. It was even associated with conspiracy theories regarding totalitarianism. For example, one reader commented on a German study which found encouraging data regarding child morbidity and hospitalization:

“Thank you, PECC. It seems that world governments have fallen in love with the pandemic. I’ve decided it’s all done intentionally, and there’s no way back. The trend is global totalitarianism. It’s amazing how most doctors and journalists worldwide collaborate with this” (PECC, December 2020).

This comment represents an extreme group of vaccine opponents claiming that the management of the COVID-19 pandemic, or even its very outbreak, was deliberately designed to eliminate democracy and deny individual freedoms and a move toward a global totalitarian government. For example:

“You, all the doctors and professors who studied at the different academies, following the years in those academies, your brains have shrunk so much that you can’t understand that there’s such a thing as a conspiracy. And what is happening today is one big conspiracy against us. There’s no connection between what is happening here and our health that we’ve already understood. This is an attempt to gain control and turn Israel into a fascist digital dictatorship” (PECC, December 2021).

**Theme 5. “Nothing will break us! [from our firm position]”: Urge for Action.**

Fear of the vaccine’s side effects, together with the assumption that ulterior motives govern the pandemic management, have led vaccine opponents to take active action against the establishment and its health instructions. In HBM terms, this aspect, urge for action, relates to any stimulus which will assist individuals in changing their behavior, whether it is a personal or family health-related situation, or the social environment [39]. In our case, motivation for action seems to work backward, leading not to vaccine compliance but rather to vaccine opposition. Moreover, this opposition is active, with opponents seeking to influence others.

This opposition developed together with the development of the vaccination campaign, intensifying with time as recommendations for additional vaccine doses were given, peaking when children were included in the campaign. The abovementioned Green Pass caused great anger, clearly broadening the circle of opposition, and intensifying active opposition, so much so that some referred to the Green Pass as the “Green Patch”, in reference to the yellow patch Jews were forced to wear during the Holocaust:

“The Jewish State is the only one using this fascist selection badge you call a Green Passport. Israeli MOH, you will be remembered in infamy” (MOH, May 2021).
The use of Holocaust-related symbols in the Israeli context indicates the extreme opposition to the measure in question, as it is considered taboo.

In addition, vaccine opponents saw the Green Pass as a symbol of coercion, exacerbating the existing social distancing restrictions:

“This Green Patch is shameful. It doesn’t really work in practice. It’s only to make people get vaccinated, and anyone who collaborates with it legitimizes the dictatorship. Today it’s the Green Pass and later on who knows what else they’ll throw at the citizens. Democracy is over and so is our right to our own bodies. Shame” (MOH, May 2021).

Another comment on the same post read as follows:

“Instead of marketing the Green Patch, tell the people, those you lied to saying the vaccine is safe and has been approved, the many thousands of people suffering from side effects and the huge spike in annual mortality since the beginning of the Pfizer operation. I myself am astounded to discover that nearly every friend or acquaintance I ask about changes in their health following participation in your experiment suffers from “slight” or serious side effects: facial muscle paralysis, paresthesia, different neurological phenomena, strangulation sensations, stroke (which fortunately did not cause death), numb arms, nausea, dizziness, serious weakness, pneumonia, strange swellings, and many other terrible things. Unfortunately, some people don’t want to think there’s a connection between their deteriorating health and the vaccine. Your brainwashing worked great” (MOH, May 2021).

As mentioned above, besides the Green Pass, which intensified the opposition, the recommendation to vaccinate children was a significant catalyst for opposing the vaccine. For example:

“The MOH people are welcome to inject their own children with whatever they wish and leave ours alone. We will take advice from healthcare professionals who care about our children’s health rather than foreign interests” (MOH, November 2021).

Others went even further and described the vaccines as a “hunting trip” aimed at diluting the population.

“A 12-year-old child died four days after the vaccine. The family was offered a bribe not to talk” (PECC, March 2022).

“As hard as you can!!! There are already murder victims” (PECC, December 2021).

The use of the term “murdered” rather than “died” or “passed away” was not coincidental. It conveys the perception that the vaccines were not only dangerous or ineffective but deliberately designed to kill.

“Today, I understand that all you care about is that we become as sick as possible. Otherwise, how will you make money if we’re healthy??? I’m proud of all my family who are not vaccinated! My parents, my husband, my children, my sisters, my nephews! And nothing, but nothing will break us!!!” (MOH, December 2021).

Another example of this was a comment on a post that presented data according to which, during the COVID-19 pandemic, the US had 300,000 annual deaths more than average:

“In my opinion, the number of dead due to COVID-19 “vacspiracy” (The word in Hebrew was shcorona, a portmanteau of sheker (lie) and Corona.) is much higher than 300,000” (PECC, April 2022).

4. Discussion

Since its outbreak at the beginning of 2020, the COVID-19 pandemic has affected people’s lives worldwide [43] and affected, among other things, individuals’ attitudes
regarding vaccines. The present study examined justifications for COVID-19 vaccine opposition in social media comments by analyzing the Facebook pages—Mida’at (NGO), the Israeli MOH, and PECC. The HBM used to analyze and categorize vaccine opponents’ stances is a commonly used predictor of health-promoting action, such as vaccine compliance [44]. We demonstrated how the model explains vaccine avoidance in a manner perceived by vaccine opposers as a health-promoting action, with justifications ranging between fear and avoidance at one end and anger and activism at the other.

4.1. The Perception of the Threat of a Disease

The model is centered around how people perceive the threat of a disease. This perception is based on how severe they think the disease is and how much damage it can cause. Vaccine opponents tend to believe that the risk of being harmed by the vaccine is high and that the consequences of such harm are severe. On the other hand, they think the likelihood of being seriously affected by the disease is low or even does not exist.

Studies examining vaccine compliance have found that the perceived benefits are significantly lower than vaccine hesitancy [45,46]. The present study found that the vaccine’s advantages have been questioned, which explains vaccine opponents’ avoidance. They do not see the vaccine as effective in preventing the disease but rather as a real danger in terms of its serious side effects.

4.2. Emotional and Cognitive Barriers to Change and Response to Vaccination

Barrier perception carries much weight when deciding to comply with the vaccine; the higher it is, the lower compliance becomes [47]. The study’s findings indicate emotional and cognitive barriers. Emotional barriers included fears of the vaccine and the side effects that might follow it, similar to findings showing that the most common reasons for vaccine refusal were fear of side effects, anonymity assurance, faulty perception of vaccine-related risk, and lack of accurate information [46].

Cognitive barriers included distrust, which deepened as the pandemic progressed. Broadly speaking, distrust of vaccines was identified as one of the ten leading threats to world health [20]. In this case, distrust was aimed first at the management of COVID-19, with an emphasis on the government and the MOH in particular, and later transformed into a suspicion that the vaccination operation served foreign and even dark economic and/or political interests. These distrustful comments are similar to those appearing on Israeli social media in 2013 against the MOH’s campaign promoting the polio vaccine [25].

4.3. Urge for Action of the Commenters by Resisting the Vaccines and Publicizing Their Stance on Social Media

The more we delved into the analysis chronologically as the pandemic unfolded, the more extreme the discourse became. Anti-vaccine commenters argued not only that the vaccination for COVID-19 was unnecessary but also that the establishment representatives were hiding things from the public, collaborating with forces indifferent to public health, and even damaging people through the vaccine on purpose. This situation of false scientific data, political arguments focusing on freedom of choice, distrust in the medical community, conspiracy theories, and personal narratives about negative vaccination experiences are consistent with other studies [30].

4.4. Theoretical and Managerial Implications

After this analysis of the hesitant and opposing people, further research, which will examine and map the arguments according to detailed profiles of vaccine-hesitant people, may inform more targeted public health initiatives and provide a good basis for dealing with concerns. Studies have shown that false information spreads through social media even faster than verified data. For example, an examination of anti-vaccine arguments posted on Twitter and Facebook found that emotional tweets and posts could be more meaningful than epidemiological testimonies [29]. Hence, and by the current study’s
findings, there is a need for customized communication efforts to address specific fears and misconceptions to reduce vaccine reluctance before it becomes resistance.

5. Conclusions

Opponents of vaccines feel threatened by the possibility of being harmed by the vaccine and the severity of its consequences and side effects. Still, they do not feel threatened by the disease and its severity. Therefore, paradoxically, regarding HBM, they perceive the avoidance of vaccination as a health-promoting action. In addition, public distrust was first directed at managing the disease, but as time passed, foul play was suspected.

As the regulations became stricter, crisis management was perceived as unstable and harsh, and the population’s compliance with vaccinations weakened (as seen in the proportion of those vaccinated with the first, second, and third doses) [1]. Accordingly, it appears vaccination hesitancy may develop over time—first into public distrust in the government and next into conspiracy and anti-vaccination activism. Hence, early detection of hesitancy may reduce the scope and depth of the phenomenon. Alertness to the “noises” of the population, more focused information, and dealing with “fake news” emerging from the media will improve the ability to inform the public in a way that will increase trust and compliance with vaccinations and health-promoting behavior in general.

The study findings are relevant to public health officials in understanding the population’s needs. They call for significant action in the face of vaccine hesitancy and provide a solid foundation for policymakers and health communication researchers regarding social media and its crucial effects on public trust.

Limitations and Future Directions

Despite using three Facebook pages, which represent the entire population to a large extent, we used more quotes from the MOH and PECC because they included more vaccine opponents’ comments. However, we analyzed the same number of texts on the three websites based on the same search words from the same period of time. Another limitation was our lack of knowledge of the commenters’ demographic characteristics. Future research may wish to study vaccine opponents’ stances using a statistical approach that would enable the examination of differences among different subgroups based on social status, gender, education, and ethnicity (for example, in the Israeli context, differences in reader comments between Jews and Arabs, or more generally, between different socioeconomic classes).

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Informed Consent Statement: Not applicable. All information is collected from public Facebook pages so that no used is made of the reader’s comment’s identity. The data is collected completely anonymously, which preserves the privacy of the respondents. The Institutional Ethics Committee approved this procedure and its principles.

Data Availability Statement: This study did not create new data. The data presented in this study are available online at www.facebook.com, accessed from 1 October 2020 to 31 May 2022, in accordance with the search rules specified in the methodology chapter.

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