



Research Article

Playing with Fire—Negative Perceptions towards COVID-19 Vaccination

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Abstract. Living during a pandemic has a great impact on a person's health and psychological functioning. While many took the vaccine, others were very sceptical about the intentions and motivations of political and health authorities and the safety of the vaccine. Vaccines may play a role in prevention of disease, however some are against vaccination. This paper will explore the reasons and arguments that people put forward to support their stance against vaccines and the COVID-19 vaccination. This will help in providing a deeper understanding of these participants' points of view, along with their experiences during this challenging period in time. A mixed methods approach was used. Study one was a quantitative study using online survey methodology to determine the degree of vaccine hesitancy and associated reasons. The most frequently cited reason given for not taking the vaccine were about safety issues. Study two was qualitative and involved interviewing six participants recruited through purposive sampling. The transcripts were analysed by using Thematic Analysis. The three main emerging themes were reasons related to health, others to the socio-political context and the third was the perceived lack of scientific information on COVID-19 vaccine. The results concluded that the participants' objections to take the COVID-19 vaccine emerged from personal health factors, and was manifested as a form of protest against authorities.

Keywords: Pandemic, vaccination, hesitancy, thematic analysis, lived experience

1 Introduction

The SARS-CoV-2 pandemic struck the world suddenly with people desperate for a cure and hoping for a hasty return to normality (World Health Organization, 2020). Once COVID-19 vaccinations were developed, a sense of hope was rekindled within communities. Authorities encouraged people to get vaccinated, with the aim of reaching herd immunity (Randolph et al., 2020). Compared to other countries, Malta achieved high vaccination rates earlier than many other countries (Cuschieri et al., 2021). Immunization programme success could paradoxically, result in complacency and ultimately, hesitancy, as individuals weigh the risks of vaccination against risks of the getting the disease. For some, vaccination was not the way forward. A study by Troiano et al. (2021) indicated that aspects such as ethnicity, working status, religiosity, low educational level, young age, and low income decreased the likelihood of getting vaccinated, whereas positive personal beliefs about vaccination in general promoted COVID-19 vaccination in individuals. Various studies have shown that women have a lower acceptance rate of the COVID-19 vaccine (Borga et al., 2022; Callaghan et al., 2020; Khubchandani et al., 2021). Persons' political beliefs were found to affect the acceptance rate (Trent et al., 2022). Ward et al. (2020) established that individuals who were biased towards radical parties or did not vote had a lower vaccine acceptance rate. On the other hand, Pogue et al. (2020) concluded that political ideology in the United States had no correlation with COVID-19 vaccine opinions and found that vaccine acceptance was higher among those who were highly concerned about being infected. Internet has played an important role in spreading fears

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about the COVID-19 vaccine. Anti-vaccination movements voiced their opinions on online platforms, enabling a vaster reach of people and instigating further vaccine hesitancy (Kim et al., 2020). An analysis of eighty-two international studies reported that vaccine hesitancy was mostly due to uncertainty regarding the vaccine's efficacy and effects, mistrust in authorities, misinformation spread through social media, and reasons pertaining to their religious beliefs (Biswas et al., 2021). There were ethical and legal issues related to COVID-19 vaccination strategies. Every individual has the right to refrain from taking the vaccine (Amin et al., 2012). Some countries enforced restrictions upon the unvaccinated, arguably violating their human rights. In countries, such as in Austria and Greece, during the early months of 2022, people were fined if seen outside of their houses during partial lockdowns when they could not prove that they were vaccinated (Burki, 2022). In Malta, as restrictions for the unvaccinated increased, more people questioned the enforcement of vaccination, claiming that it was against their human rights. This led to protests, such as the one held in Malta on the 24th of July 2021. Conflicts were ignited between the citizens and government authorities. Some of the restrictions imposed on unvaccinated individuals in November 2021 included being barred from attending social events such as parties, no entry to certain restaurants and bars, a longer quarantine period if in contact with persons who tested positive, and no entry into Malta unless spending time in quarantine. These restrictions were enabled in 2021 by means of section 27(b) of the Public Health Act (Chapter 465 of the Laws of Malta). Even though Malta was called out for these practices by the European Commission during a press briefing on the 12th of July regarding unvaccinated travellers wanting to visit Malta, the regulations were not changed (European Commission, 2021; Galea, 2021)). Persons started forming anti-COVID-19 vaccination groups of like-minded people who believed that they were being discriminated against when they were not allowed to attend certain places and to travel unless they were vaccinated. This study will explore why some individuals were against the COVID -19 vaccination using a mixed methods approach.

2 Method

This study which follows the sequential exploratory mixed methods design, carries out an analysis on the data collected to compare and corroborate quantitative results with qualitative findings on the same topic of investigation (Creswell, 2003; Tashakkori et al., 2003). Quantitative data was collected through an online questionnaire while qualitative data was collected through interviews. The results from the online questionnaire have already been

published in (Cordina et al., 2021). A short-focused anonymous questionnaire using Google Forms targeted at individuals aged 16 and over was disseminated over social media. The fieldwork took place between the 26th October 2020 and 26th November 2020. The questionnaire gathered demographic data and asked respondents if they were willing to take the COVID-19 vaccines. Those who declared that they were unsure or not willing were asked to give reasons for their choice. Following the questionnaire, qualitative data was collected through semi-structured interviews with a purposive sample of six adult participants from different walks of life who had voiced their opinions against vaccination on the social media. An interview guide was prepared based on literature regarding attitudes towards vaccination. Questions addressed their perceptions on vaccines and reasons why some people were against vaccination. Fieldwork took place May 2022. With the permission of the participants, interviews were recorded and transcribed. Pseudonyms were used to ensure anonymity. The duration of the interviews ranged between 40 to 60 minutes. Participants preferred voice recordings over video recordings. Throughout the recruitment, interviewing and debriefing stages, sensitivity and confidentiality were always assured.

3 Results

A total of 843 individuals participated in the survey with a male to female ratio of 1:3. Just over 60% were over 40 years of age and 87% of respondents had received a post-secondary/ tertiary education.

Females were more willing to take the vaccine than males (chi-square=14.63, df=4, p=0.006). Willingness to take the vaccine also varied with age. The cohort of participants between 40 and 49 years were more unsure whether to take the vaccine than those who were 60 years and over who responded that they had the intention to take the vaccine (chi-square= 23.99, df=10, p=0.007). No other significant differences were found except that females cited fear of injections as a reason for not wanting to take the vaccine more than males (chi-square=7.43, df=1, p=006).

From the total sample 16.4% (n = 132) of respondents were unwilling to take the vaccine. Table 2 shows the reasons why they were against vaccination. The most cited reason was related to safety issues.

Participants were asked to cite additional reasons why they were unwilling to take the vaccine and these are summarized in table 3.

The qualitative part of the study used interviews to collect data. Table 4 describes each participant, using a pseudonym so that participants remain anonymous. Identifying details were removed.

Demographic	<i>n</i>	%
Gender		
Male	220	26.4
Female	609	73.0
Prefer not to say	5	0.6
Age		
Under 19	40	4.7
20–39	277	32.8
40–59	381	45.1
60 and over	126	15.0
Level of education		
Secondary school	96	11.4
Post-secondary	172	20.4
Tertiary/further	562	66.6
Country of residence		
Malta	719	85.2
Other	103	12.3

Table 1: Demographics of Survey Respondents (Cordina et al., 2021).

Reason	%
I think COVID-19 vaccine may not be safe	85.2
I am against vaccination in general	16.0
I believe in natural and traditional remedies	16.6
I do not think it will give immunity	35.0
COVID-19 is just like any other flu that will pass	12.8
I have had a bad experience with vaccines	10.6
I am afraid of injections	3.0

Table 2: Reasons for Not Wanting to Take the Vaccine (Cordina et al., 2021).

Reason	<i>n</i>
Short a time for developing & testing vaccine	10
Afraid of long term repercussion	2
Afraid there are harmful substances in vaccine	2
I do not trust the system, money making venture	2
I have a medical condition	2
It is all a political game	1
I am not a guinea pig	1

Table 3: Additional Comments For Not Wanting to Take the Vaccine (Cordina et al., 2021).

Participant and age	Educational Level	Employment
Anna, 45	Tertiary	Midwife
Julia, 40s	First Degree	Employed
Rachel, 44	Level 5	Educator
Karen, 44	Diploma	LSE
Tom, 23	Level 4	Customer Care Agent
Ben, 23	Tertiary	Photographer

Table 4: Participants Taking Part in the Interviews.

There was strong overlap between the reasons given by participants answering the questionnaire for not wanting to take the vaccine and those interviewed. Data gathered through the interviews was analysed using thematic analysis (TA) (Braune et al., 2006). TA is a tool used to explore the perspectives of various participants while being able to compare them, allowing for the possible emergence of unexpected insights (Braune et al., 2006). Table 5 gives the three themes which were identified when analysing the transcripts. These were issues related to health, issues related to the socio-political context and issues related to provision of information.

3.1 Health Issues

3.1.1 Side Effects

One of the main reasons behind participants not taking the vaccine was because they were afraid of the long- and short-term side effects that they believed were not always being made public. Participants were afraid that since the vaccine had only been tested over a short time frame, the long-term effects or consequences were still unknown. Ben remarked, “no one in reality will ever know the side effects that it can have in the future.” As participants read more about the possible side effects and unofficial information about the vaccine, they became more concerned. They felt that they were not being given the full picture about the different vaccines and their side-effects. Participants mentioned experiences of individuals they knew who experienced side effects that seemed to have appeared after taking the vaccination. “I am personally aware of people who have suffered severe side effects of the vaccine, and they were not mentioned anywhere” (Julia). “...five days after the vaccines, her body was full of psoriasis” (Anna). “My mum has Parkinson’s. After she took the vaccine, it got worse rapidly, not gradually...” (Rachel). These occurrences, according to the participants, were never made public or discussed and participants felt they were not being told all the facts about potential side effects.

“As soon as my best friend took her booster, she threw up nine times in a span of like six or seven

hours” (Rachel)

In answer to the question “How determined are you that you will refrain from taking the COVID-19 vaccine?”, participants answered “6,000%” (Karen), “200%” (Julia), “no, nothing will change my mind” (Rachel), and “Hundred percent! Why? We have been taken for a ride now for far too long” (Anna). The question regarding the possible long term effect of the vaccine was salient in participants’ minds and they felt that they would rather refrain from taking it rather than live in fear of side effects.

3.1.2 Making Decisions for Others

Making decisions on behalf of another person regarding whether to give the vaccine was considered a great responsibility. While it was very easy to decide for themselves, participants found it difficult to make a decision on behalf of other family members such as minors and the elderly. Participants were afraid that if something had to happen to these relatives they would be blamed however some would still have decided against the vaccine. Ben said “If I had children, I probably won’t allow them, just because I don’t trust” (Ben).

3.1.3 Personal Circumstance

Furthermore, some also communicated that they were hesitant about taking the vaccine for the reason that they suffer from other conditions that that they were afraid could worsen after taking the vaccine. Ben, who had epilepsy, had spent the last few years of his life terrified of having another seizure which would have severe consequences on his life. He feared that if he took this vaccine he would be “playing with fire” and was afraid of the possible repercussions.

“I did not want to take the vaccine because I suffer from epilepsy. . . . I wasn’t even sure if I had, if I could play with fire and kind of risk, me taking a vaccine, not knowing how it’s going to affect and trigger something that’s in my mind.”
(Ben)

Another reason mentioned by participants for not want-

Themes	Sub-Themes	Codes	Codes	Sample Quotes	
Health Issues	Side Effects	Fear	Health aspects	"I don't trust" (Ben)	
	Making Decisions for Others	Trust	Death	"repercussions of the vaccine" (Karen)	
Socio-political	Personal Circumstances	Anxiety	Menstrual cycle	"deep worry down inside of me" (Ben)	
	Natural Immunity	Confidence	Circulatory system	"inconsistent... it gives me anxiety" (Rachel)	
		Certainty	Reproduction	"how is going to affect and trigger something" (Ben)	
	Lack of Trust in Politicians and Health Authorities	Unknown future	Epilepsy	"damaging our immune system" (Anna)	
		Dependence	Immune system		
	Human Rights Discrimination	Worry	What if?		
		Playing with fire	Risk		
	Socio-political	Lack of Trust in Politicians and Health Authorities	Leadership	Manipulation	"remove choice for us" (Tom)
			Lack of trust	Prisoners	"they want to make money" (Tom)
		Influence	Abuse	"virus was created in a lab and so was the vaccine" (Julia)	
Lack of transparency		Rebellion	"cannot afford to lose my job" (Karen)		
Hidden Agendas		Threat	"hand in hand with the government" (Ben)		
Dictatorship		Biases	"I find it abusing" (Anna)		
Money		Choice	"a subtle dictatorship" (Julia)		
Intentions		Regulations	"I was forced to take the vaccine" (Ben)		
Restriction		Inconsistency	"That's a threat. It is blackmail" (Rachel)		
Forced		Power			
Complacency	Blackmail				
Information	Scientific data	Freedom			
		Social media	Pandemic	"some sort of hidden agenda" (Karen)	
	Social Media	Traditional media	Effectiveness	"Social media played a big part of misinformation" (Anna)	
		News	Protection	"information based on fear" (Anna)	
		Controlled	Statistics	"two sides to a coin" (Ben)	
		Published	Safety	"conflicting decisions" (Anna)	
		Data	Constructive criticism	"no information at all about it" (Karen)	
		Knowledge	Resources	"paying their price for that decision" (Ben)	
		Lack of Information	Fast production		
		Education	One size fits all		
Opinion	Patient leaflet				
	Open minded				
	Misinformation				

Table 5: Themes and Subthemes Emerging from Interviews.

ing to take the vaccine were issues revolving fertility and the reproductive system. Participants noted that they knew several women who were having irregular periods after taking the booster. Anna said

"...their menstrual cycle went haywire" (Anna)

while Rachel said

"...those who were in their menopause started getting their period again." (Rachel)

This topic was considered particularly delicate since it concerned women's health and reproduction. The participants pointed out that the effects of COVID-19 vaccination on women in this regard, will only be known as time passes. For this reason some women were not ready to take the risk.

In addition, some participants believed that there were potential risks to the male reproductive system. Tom mentioned that some sperm donors were being paid more if they were unvaccinated, due to the potential unknown risks of these vaccines. He pointed out that

"... sperm banks around the world they're actually paying 2 to 3 times more for people who are donating sperm without having taken the COVID-19 vaccine." (Tom)

Another worry discussed by participants regarding side effects were issues related to the circulatory system. Participants said that only time can tell what the long term side-effects of the vaccine were and they were not willing to take the chance. One of the participants reported that

"...after the second dose of vaccine a friend had three mild MI which means 'heart attack' in simple words." (Anna)

She also said that

"...another friend who is a doctor, six days after the booster had myocarditis, which means infection of the heart muscle." (Anna)

This information, whether true or made up was believed by Anna and was the reason which made Anna start to doubt the safety of the vaccine.

3.1.4 Natural Immunity

Another reason given by some of the participants was about one's natural immunity. The participants communicated their lack of awareness about the potential effects of this vaccine on a person's natural immunity. Some thought that the vaccine would be damaging their immune system, whereas others thought that by taking the

vaccine they were weakening their natural immunity to a point where their bodies would eventually become dependent on vaccinations.

"One of my biggest worries is, whether with these vaccines, are we really improving our immunity or we are damaging our immune system." (Anna)

Julia said

"If I get vaccinated, I believe that I am telling my body that it's vulnerable to this virus and that it cannot fight it unless vaccinated. I surely do not want that."(Julia)

Other participants claimed that our bodies will by time adapt to this virus and that it would become weak enough not to be of danger to one's health. They would rather let the natural process take its course, and eventually do without vaccination. Karen said

"I know that the immune system of the human being will eventually get used to this kind of virus, and maybe there might not be the need for the vaccine till that time." (Karen)

3.2 Socio-Political Issues

3.2.1 Lack of Trust in Political Authorities

The authorities' main aims were to safeguard the public's health. However certain measures which were taken came across as discriminatory and invasive. Some participants believed that the vaccine was a way of making money and that some people were getting rich as a result of promoting the vaccine. This perception impacted participants' trust in politicians and health authorities. Like in many countries, the issue became politicized. Rachel believed that good leadership was lacking.

"We do not have a reliable leadership...we rely on other countries' decisions." (Rachel)

"The reasons are purely political. I admit that I have trust issues. I believe that this virus was created in a lab and so was the vaccine." (Anna)

Ben spoke of "last minute decisions" that the government took on a day-to-day basis, resulting in inconsistencies.

"I am being forced for something which Biden and other countries have given exemptions to. Why do those people have a choice? Here they are trying to remove choice for us." (Tom)

Anna found the directives issued by the health authorities “abusive” while Julia and Karen questioned whether there were hidden agendas.

“I know that in Malta there are as well, but they are hidden, it’s some sort of hidden agenda.”
(Karen)

Anna added that

“...researchers took the world population for a ride.” (Anna)

Participants said that since Malta is a very small country, people know each other, and it was very easy to find out about people who suffered negative consequences from the vaccine. They believed that the problem was created when the authorities’ messed with data in order to sell a story that everything was fine.

“I’ve also heard of stories of people who died in hospital, and they’ve told the next of kin that the person died of side effects and symptoms and reasons that had never existed in their body, so they blatantly lied about something that the next of kin knew it could not be possible. So, they are also covering up certain stories of deaths through COVID-19 and the vaccine.” (Anna)

3.2.2 Violation of Human Rights

Participants believed that their human rights were being violated, by indirectly forcing vaccines and restrictions onto people, leading them to get vaccinated against their own will. Anna said

“I would fight for my right because we have a fundamental human right to choose what we inject in ourself. So, I would definitely go to court for it.” (Anna)

Another belief was that authorities wanted to achieve herd immunity which made people more angry as they felt they were being forced to conform. Some participants said that in spite of restrictions they were not manipulated into taking the vaccine however others had no choice other than to follow authorities’ regulations

“...we are the people that are having to conform and miss out on life.” (Ben)

The element of coercion fuelled the belief that the vaccine was a scam used by authorities to make money, with Tom saying

“It is shown that they want to make money. Plus, it is not only that, they want to force it on to everyone.” (Tom)

Anna suggested that they should have provided the public with proper information and not selected what to publish in order to instil fear in people:

“I think, the authorities practiced dictatorship. It was all about rules and restrictions—not to go out and not to travel... Most importantly was to give the public proper information and not give information based on fear.” (Anna)

3.2.3 Discrimination

Additionally, participants felt discriminated against because they were unable to participate in certain activities which only vaccinated people could do. Rachel said

“I think a lot of people took it to travel.”
(Rachel)

Besides not being able to travel, unvaccinated people could not take on certain jobs, were not allowed in restaurants and clubs, and could not take part in other leisure events. In fact, participants pointed out that some people took the vaccine against their will just to be able to benefit from the rights of vaccinated people. Some were also threatened that they might lose their own employment, leaving them without a choice.

“...foreign workers will lose their Visa if they don’t get vaccinated. That’s a threat. It is blackmail.” (Rachel)

3.2.4 Lack of information

The third theme that emerged in this study was that of lack of information. They felt that the Maltese were not exposed to enough resources and knowledge about the different vaccinations available.

“I have all these questions, but I think they don’t have answers for them. So, right now, I don’t think anything would persuade me to take it.”
(Rachel)

3.2.5 Scientific Data

According to participants, there was a lack of scientific and statistical data regarding whether the vaccine was working the way it was meant to be working. When trying to make an informed decision, participants believed that some information was not being shared and that the public was not privy to all the data and results of research being carried out worldwide. Anna believed that

"There's still needs to be statistics looking into, if this vaccine is really protecting people."
(Anna)

Some also felt that *"the production of the vaccine was too fast"* and there could have been shortcuts and oversights (Rachel).

Tom explained that

"according to the standards of medicine, vaccination testing varies between five to 20 years."
(Tom)

He compared the COVID-19 virus to other diseases such as 'AIDS'. He said that for AIDS *"the cure came out after a long time"*, insisting that the COVID-19 vaccination testing was done too quickly.

3.2.6 Media

Participants believed that people were being manipulated by the media, with excessive fear being instilled in people, especially when there were inconsistent narratives from authorities. According to participants social media played a vital role during the pandemic. They claimed that social media were not carrying scientific information.

"I think social media was the biggest hindrance of the way the virus and the pandemic were handled. I think authorities in the world should have control on social media. And controlling social media does not mean, taking people's freedom of speech,...but the media should ensure that they provide proper scientific information for the public's knowledge." (Anna)

Ben also expressed suspicion in Malta's State broadcaster (PBS). He believed that it was controlled by the government, and therefore it would not publish news that went against the directives of government and health authorities, even though it was the nation's right to know.

4 Discussion

When triangulated, results pointed to three main key findings. The first was the lack of trust in political and medical authorities and big pharma. In Malta, vaccination became politicalized as happened in other countries (Trent et al., 2022). The decision was not linked to the party one voted for but more about whether the Superintendent of Public Health and her team were being autonomous in their decision-making regarding vaccination or whether they were being directed by the Prime minister and the Minister for Health or indeed other international political leaders. The party in opposition did not directly oppose vaccination however it criticized the government on issues

such as the lack of transparency and the question on the infringement of human rights. The European Commission monitored measures which were being taken by most of Europe. Their role was to bring attention to any discriminatory, ineffective, and unethical measures taken by authorities. Mistrust in politicians prevailed even before COVID -19 however conspiracy theories were much more fertile during this period. The belief that the COVID-19 virus was manufactured in a lab in order for big pharma to make money from the vaccines was reported not only on social media but also on mainstream media and international news agencies. Conspiracy theories could have been strengthened when WHO called for further studies following the publication of the report on the origins of SARS-CoV-2 virus published by an international team of experts after a field visit in Wuhan, China. In line with other studies (e.g. Ullah et al. (2021)), some also believed that the vaccine was a part of a money-making venture, and that pharmaceutical companies and politicians were promoting the vaccine because they were going to receive financial gain (Ullah et al., 2021).

The second finding emerging from the study was about herd immunity and the common good. While some participants could accept the idea of herd immunity they were not ready to be 'part of the herd' and get vaccinated. The notion of the 'common good' was not accepted by some participants. They felt than knowledge about long term side effects was not known and hoped that herd immunity would be reached without them having to take risks by taking the vaccine themselves. Other participants did not believe in herd immunity as a concept while others believed that the body can generate its own defence against the virus. Others still believed that politicians were using the notion of herd immunity as a way of controlling people and controlling the country.

The third issue emerging from the findings was about the availability of information. Social media played a key role in instigating fears about the vaccine and in promoting the anti-vaccination sentiment. Participants often mentioned information they read on social media platforms as a source of evidence. The role played by social media in promoting both news and fake news has been documented by several studies (e.g. Kim et al. (2020), Montagni et al. (2021), Melki et al. (2021)). It seems that participants were aware of fake news circulating in the social media however they were selective in what to believe and were more willing to accept the information being circulated by anti-vaccination groups. Participants were also sure that media, including the state broadcaster, were being manipulated in order to make people take the vaccine. They, however, did not seem to see the other side of the coin which was that social media could be used to convince

people not to take the vaccine.

Many claimed that there was lack of information about the vaccine, about the side effects and about reasons behind the decisions taken by the authorities. The findings from both the qualitative and the quantitative data showed that most participants were misinformed about the vaccine. Some had questions which they could have easily checked but did not, preferring to believe statements which were congruent with what they believed thus avoiding cognitive dissonance.

4.1 Conclusion

Over the past decade, as a nation, people have developed a stronger understanding of their civic rights, duties, and responsibilities. It is being suggested that further research is essential in understanding vaccine hesitancy and negative attitudes towards vaccination as this would prove to be important for policy making. It will also provide Maltese policy makers with the information needed to adapt health campaigns to the Maltese public. It is important to find out whether COVID-19 vaccine hesitancy has given rise to increased hesitancy towards other well established vaccines. The recent resurgence of measles in several countries is one example. Since this survey was carried out with a volunteer sample, it cannot be generalized to the population and neither can the qualitative findings. It is therefore important to repeat such studies and observe patterns. Moreover, giving people a chance to voice their opinion is important even if these opinions may be unpopular. They must be heard. "Throughout history, it has been the inaction of those who could have acted; the indifference of those who should have known better; the silence of the voice of justice when it mattered most; that has made it possible for evil to triumph." (Selassie, 1963)

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