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Identifying barriers to vaccination intention at walk-in vaccination facilities in deprived neighbourhoods: A cross-sectional survey

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ABSTRACT

Objectives: Low COVID-19 vaccination adherence in deprived neighbourhoods is problematic since the prevalence of chronic diseases associated with mortality rates due to COVID-19 is higher in these populations. The aim of this study is to provide an insight about beliefs and considerations relating to vaccination intention among inhabitants of deprived neighbourhoods in the Netherlands.
Design: Cross-sectional survey.
Setting: Easily accessible vaccination facilities at markets in deprived neighbourhoods in the Netherlands.
Participants: Participants were recruited at three vaccination facilities that were set up at markets in deprived neighbourhoods in Rotterdam. A total of 124 surveys were retained for analysis.
Main outcome measure: Intention to get vaccinated against COVID-19.
Results: The survey was filled out by 124 respondents; 62 % had - prior to visiting the easily accessible locations - intended to get a COVID-19 vaccine and 38 % were hesitant (22.3 % had doubts and 15.7 % did not plan to get vaccinated). Many people mentioned the convenience of an easily accessible location nearby. At the bivariate level, the influence of information from the family was associated with vaccination intention ($p < 0.01$). In a logistic regression model, both fear of vaccination and fear of side-effects were significantly associated with vaccination intention (ORs 0.56 (CI 0.35–0.89) and 0.47 (CI 0.30–0.73)).
Conclusion: The accessibility of a vaccination facility, family influence and fear are relevant factors for the intention to get vaccinated against COVID-19 in people living in deprived neighbourhoods. Interventions should address these factors in order to increase vaccination uptake.

1. Background

The COVID-19 pandemic had a significant global impact. The principal exit strategy for this pandemic was the rollout of an extensive vaccination scheme [1,2]. In a large number of Western countries, the fully or partially vaccinated percentage of the population has increased rapidly [3]. This high vaccination rate has led to a significant decrease in COVID-19-related hospitalisation and mortality rates [3,4]. Not only has the high vaccination rate relieved the pressure on the healthcare system, it has also played a significant role in the phasing out of restrictive COVID-19 measures [4,5]. Although the vaccination rates in Western countries are therefore generally high, vaccination rates are not comparable in all regions [6]. For example, compared with vaccination rates in general in the Netherlands, the vaccination rates in deprived neighbourhoods in the summer of 2021 were relatively low at about 30–40 % [7], compared with 80–90 % in other areas. The vaccination in deprived neighbourhoods is important to prevent avoidable morbidity and mortality. For instance, the inhabitants of deprived areas more often have chronic diseases such as diabetes mellitus type 2, making them highly vulnerable to the complications associated with COVID-19 [8].

The World Health Organization (WHO) has stated that hesitancy relating to the acceptance or refusal of vaccination is one of the greatest threats to global health and it is seen in all demographic groups [9]. Surveys of the general public show a complex of barriers and enablers regarding the intention to get vaccinated [10]. Barriers include a preference for infection-induced immunity, concerns about side-effects, distrust in government, lack of information, needle anxiety, and the influence of conspiracy theories and disinformation in the media/social

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media [11,12,13]. Enablers include social norms, generally and in a person's individual social environment. For example, family, relatives and friends can play an important motivating role in the positive intention or negative intention, i.e., hesitancy, to get vaccinated [14,15]. Of course, the benefits of being protected against COVID-19 infections also play an important role in the acceptance of the COVID-19 vaccine. The perceived barriers and benefits, in conjunction with the perceived threat of COVID-19 as a combination of perceived susceptibility and severity, are important predictors of vaccination hesitancy or intention. The Health Belief Model includes perceived threats, barriers and benefits of this kind as determinants of health behaviour, in this case getting vaccinated against COVID-19 [16].

Little is known about the determinants of the acceptance and refusal of COVID-19 vaccination in deprived groups with easy access to vaccination facilities. For instance, we need to know more about the role of the social environment such as family or friends in different socioeconomic groups [17]. Moreover, we know little about the role of the practical barriers in the physical environment that determine access to vaccination locations in deprived groups who lack, for instance, means of transport [18]. This study aims to provide more insight into beliefs and considerations relating to vaccination intention among inhabitants of deprived neighbourhoods in the Netherlands.

We therefore conducted a survey of visitors to easily accessible walk-in vaccination facilities at local markets in deprived neighbourhoods in Rotterdam, one of the largest cities in the Netherlands, asking about their intention to get vaccinated. The following research questions are addressed: What are the reasons for using the easily accessible vaccination facilities and what role is played by the information visitors receive from family and friends, government and professionals? Which socio-demographic factors and behavioural determinants – perceived susceptibility and severity, barriers and benefits, including the accessibility of the vaccination location – are associated with vaccination intention in visitors to the easily accessible facilities?

2. Methods

2.1. Design

We used a cross-sectional survey design to study beliefs and motives relating to vaccination in visitors to easily accessible vaccination locations in deprived neighbourhoods. This study is part of the GP-COVERAGE project, which was reviewed and approved by the Ethics Review Committee of the Erasmus University Rotterdam (#20-042).

2.2. Setting

In June and July 2021, data collection took place on three days at two easily accessible walk-in market locations in two deprived neighbourhoods (Delfshaven and Feijenoord) in Rotterdam, the second largest city in the Netherlands. The weekly markets are visited by locals, who are mostly people with a low socioeconomic status and a migration background. The neighbourhoods had lower vaccination rates than other neighbourhoods at the time of our study (47.9 % and 45.2 % respectively) [19]. Some people came to these locations spontaneously or after word-of-mouth reports for information about vaccination. Others were approached by volunteer medical professionals at the markets. GPs, medical specialists, pharmacists, nurses and medical students were present at a market stand in front of the adjacent community centre (in Delfshaven) and adjacent to the mosque (in Afrikaanderwijk) to give information (in different languages) about vaccination. Volunteers from the community centre and the mosque helped with the organisation. After having received information at the community centre or mosque, people were given the opportunity to be vaccinated inside immediately. If they decided to do so, they were first registered by the municipal health authority before being guided to a waiting area. Vaccination was given by doctors and nurses. After being vaccinated, people were directed to another waiting area where they were monitored for 15 min. Most people vaccinated in these locations had already received an invitation for a vaccination at a large-scale vaccination centre outside the neighbourhood but had not responded to the invitation. A total of 960 people were vaccinated with either an mRNA vaccine (Comirnaty) or a vector vaccine (AstraZeneca or Janssen) during the three days of the campaign.

2.3. Procedure and data collection

We used convenience sampling to recruit patients. During the mandatory 15-minute waiting time required by the national health authorities after the vaccination, a member of the research team approached participants and asked them in Dutch or if necessary in their native language whether they would be interested in participating in this study. The researchers informed the potential respondents about the purpose of the study, data handling and privacy procedures, and the voluntary nature of participation. Some people had already decided to be vaccinated before their visit to the vaccination facility, while others had not yet decided to be vaccinated. This second group was categorised as hesitant. Approximately ninety percent of the people approached agreed to participate in the study. After agreement and informed consent had been given, the researchers conducted a structured interview. This questionnaire was used to acquire an insight into the beliefs and motivations of participants who were vaccinated at these locations. After filling out the questionnaire (either together with the research assistant or on their own), the respondents were given a thank-you note with an e-mail address they could contact if they had any remaining questions about the study. For those who spoke Arabic or Turkish, the most common non-native languages, interviewers with command of these languages were available. Furthermore, a medical doctor was responsible for all procedures at the vaccination location and could be consulted in case a medical situation arose.

2.4. Study materials

The questionnaire used in this study was based on the Health Belief Model and it included 24 items. As appropriate questionnaires on HBM measures for COVID-19 were lacking, we used standardised procedures for item development as advised by Conner and Norman (2015) [20]. In behavioural research, it is common to use previous HBM studies as a guide for scale development. The questionnaire was adapted to make it appropriate for conduct in the walk-in setting and visitors from low socio-economic groups by reducing the number of questions and adapting the questions to literacy skills as much as possible. People were asked about perceived susceptibility and severity, barriers, and the benefits of vaccination in relation to their intention to get vaccinated. A short description is given below of the items covered by the survey. Detailed descriptions can be found in the appendix. After being vaccinated, the participants were asked whether they had already intended to get vaccinated or not, or whether they had been hesitant. In addition, an open question was included at the beginning of the questionnaire: Why did you choose to get vaccinated here and now? The role of information from family and friends, government and professionals in the decision to get vaccinated was measured using four items on the influence of conversations or communications from government, physicians and people in the social environment. Perceived susceptibility was measured using a five-point scale asking participants about the perceived likelihood of contracting COVID-19 if they were not to be vaccinated. Moreover, participants were asked about the severity of the consequences of COVID-19. Seven dichotomous items with yes or no answer categories regarding the potential benefits of vaccination were included in the questionnaire. These benefits related to two areas: 1. medical and societal benefits and 2. personal and practical benefits. In addition, seven potential barriers composing four scales were included in the questionnaire: social norms ($r = 0.40$), access to vaccination ($r = 0.57$), fear

of vaccination (r = 0.51) and fear of side-effects. Background characteristics were the participants' trust in GP care and the Dutch health care system, their sex, age, highest completed education, migration background, whether or not they had a chronic health complaint and whether social contacts had influenced their decision about vaccination.

2.5. Data analysis

Questions about the reasons to get vaccinated were analysed inductively on the basis of the qualitative reports of the respondents. Questions about perceived barriers and about perceived benefits were combined with latent class analysis (varimax rotation, eigenvalue cut-off = 1.00). Descriptives of frequencies and means were calculated for all variables and a distinction was made between respondents aged 60 years and older, and younger participants. Subsequently, bivariate crosstabulations and correlations were performed between the dependent variable 'intention to get vaccinated' and the independent variables from the HBM and background characteristics and items on the influence of conversations or communications from government, physicians and people in the social environment of the respondent. Finally, a logistic regression was performed with dichotomous vaccination positive or negative intention as the outcome and the variables of the HBM as independent variables, i.e. latent class scores on benefits and barriers, and standardised measures of perceived severity and susceptibility. The background characteristics were left out of the regression analysis because of absence of a bivariate association with vaccination intention.

3. Results

A total of 124 respondents filled in the survey, 62 % of whom had intended to get a COVID-19 vaccine prior to visiting the easily accessible market locations, and 38 % of whom have not had any prior intention (22.3 % had doubts and 15.7 % did not plan to get vaccinated). The characteristics of the respondents were as follows: 57.8 % were males, 52 % were 60 years and older, 44.2 % had primary or pre-vocational education level, and 55,8 % had vocational education level or, 76.4 % had a migration background and 35 % had chronic health complaints. Table 1 shows the distribution of socio-demographic characteristics in relation to age groups. The age categories were chosen because of the local policy to prioritise over-60 s for vaccination. Older visitors had chronic health complaints, a low educational level and less trust in their GP more often than the younger group.

3.1. Reasons for use of easy-access facility and influence of the social environment

Table 2 shows the categorised results of qualitative answers and the frequencies stated by the participants in their answers to the open question about why participants chose to get vaccinated at that exact time and place. The reason given most often was the easy access to the vaccination facility without an appointment, and the close proximity to where people lived. Other arguments were the possibility of circumventing the regular procedures, such as not having to wait for an invitation, the possibility of travelling abroad or no problems with making an appointment.

The influence of conversations and communications from the social environment of the family in favour of vaccination was significantly associated with the intention to get vaccinated at the bivariate level ($\chi^2(1) = 8.5$, $P = .004$.) (Table 3). Of the group of participants who reported that they were influenced by their family, 46.8 % intended to get vaccinated. In contrast, 73.5 % of the participants who reported that they were not influenced by family intended to get vaccinated. The influence of information from the government, physicians or friends was not significantly associated with vaccination intention.

Table 1
Characteristics of respondents.

Characteristics		N (%)	Below 60 years	Above 60 years
Age	Below 60 years	59 (48)		
	Above 60 years	64 (52)		
Sex	Female	46 (42.2)	29 (50.9)	17 (32.7)
	Male	63 (57.8)	28 (49.1)	35 (67.3)
Chronic health complaints	Yes	42 (35)	14 (24.1)	28 (45.2)*
	No	78 (65)	44 (75.9)	34 (54.8)
Educational level	Primary school or pre-vocational education	53 (44.2)	18 (31)	35 (56.5) **
	Vocational education or higher	67 (55.8)	40 (69)	27 (43.5)
Migration background	Yes	94 (76.4)	48 (81.4)	46 (71.9)
	No	29 (23.6)	11 (18.6)	18 (28.1)
Trust in Dutch health care	Yes	105 (88.2)	52 (91.2)	53 (85.5)
	No	14 (11.8)	5 (8.8)	9 (14.5)
Trust in GP	Yes	111 (94.9)	55 (100)	56 (90.3)*
	No	6 (5.1)	0 (0)	6 (9.7)
Influenced by information from the government	Yes	36 (30.8)	16 (29.1)	20 (32.3)
	No	81 (69.2)	39 (70.9)	42 (67.7)
Influenced by information from physicians	Yes	49 (40.8)	20 (35.7)	29 (45.3)
	No	71 (59.2)	36 (64.3)	35 (54.7)
Influenced by information from family	Yes	47 (40.5)	25 (46.3)	22 (35.5)
	No	69 (59.5)	29 (53.7)	40 (64.5)
Influenced by information from friends	Yes	50 (43.5)	27 (50.9)	23 (37.1)
	No	65 (56.5)	26 (49.1)	39 (62.9)
Vaccination intention	Yes	75 (62.5)	31 (55.4)	44 (68.8)
	No/Doubt	45 (37.5)	25 (44.6)	20 (31.2)

Note. *p <.05 ** p <.01.

Table 2
Reasons why participants came to the walk-in vaccination location.

Reasons given by participants (N = 123)	n (%)
Accessible (easily/without an appointment/was convenient/close/coincidentally nearby)	70 (46.4)
Fast (earlier than appointment via municipality/do not want to wait for letter of invitation)	34 (22.5)
On the advice of a GP	17 (11.3)
Need a quick vaccination for holiday, travel abroad or living abroad	15 (9.9)
Problems with an earlier appointment (GP, municipality or hospital), for example, appointment rescheduled, contracted corona, did not receive a call or did not get through to the vaccination appointment line	10 (6.6)
Other	5 (3.3)

3.2. Associations with vaccination intention

At the bivariate level, the barriers 'fear of vaccination' and 'fear of side-effects of vaccines' were significantly associated with vaccination intention ($t(60.44) = 2.75$, $p = .008$ and $t(72.98) = 3.21$, $p = .002$ resp.) (Table 3). No significant associations could be found for background characteristics and the standardised scores for perceived susceptibility to and perceived severity of COVID-19, and perceived benefits from the health belief model. In addition, the barriers of access to the vaccination location due to a lack of time or the effort required to reach the location were not associated with vaccination intention. When the HBM factors were entered in a logistic regression model, both 'fear of vaccination' and 'fear of side-effects' remained significantly associated with vaccination intention (ORs 0.56 (CI 0.35–0.89) and 0.47 (CI 0.30–0.73) respectively) (Table 4). Adding the variable 'influence of information from the family', which was significant at the bivariable level, to the multivariate model with the remaining two significant barriers 'fear of vaccination' and 'fear of side-effects' did not result in a significant association with vaccination intention ($p = 0.08$, OR 0.46 (CI 0.19 to 1.10)).

Table 3
Association of background characteristics and behavioural factors with vaccination intention.

		Intention to get vaccinated n (%)	No vaccination intention/doubt n (%)
Sex	Female	24 (36.4)	20 (48.8)
	Male	42 (63.6)	21 (51.2)
Chronic disease	Yes	22 (30.1)	18 (40.9)
	No	51 (69.9)	26 (59.1)
Educational level	Low	32 (43.8)	18 (40.9)
	Intermediate to high	41 (56.2)	26 (59.1)
Migration background	Yes	54 (72)	38 (82.6)
	No	21 (28)	8 (17.4)
Trust in Dutch health care	Yes	64 (87.7)	39 (88.6)
	No	9 (12.3)	5 (11.4)
Trust in GP	Yes	69 (95.8)	40 (93)
	No	3 (4.2)	3 (7)
Influenced by information from family	Yes	22 (30.6)	25 (58.1)**
	No	50 (69.4)	18 (41.9)
Influenced by information from the government	Yes	21 (29.6)	15 (34.1)
	No	50 (70.4)	29 (65.9)
Influenced by information from GP (s)	Yes	28 (37.8)	21 (46.7)
	No	46 (62.2)	24 (53.3)
Influenced by information from friends	Yes	29 (39.7)	22 (52.4)
	No	44 (60.3)	20 (47.6)
		M (SD)	**M (SD)**
Risk of contamination (perceived susceptibility, standardised)		0.10 (0.87)	−0.15 (1.13)
Severity of consequences (perceived severity, standardised)		0.10 (0.95)	−0.17 (1.07)
Medical and societal benefits (standardised)		−0.11 (0.86)	0.15 (1.16)
Personal practical benefits (standardised)		−0.04 (0.99)	0.11 (1.02)
Social norm barrier (standardised)		0.08 (0.51)	−0.13 (1.50)
Access barrier (standardised)		0.05 (1.01)	−0.08 (1.01)
Fear of vaccination barrier (standardised)		0.21 (0.72)	−0.36 (1.27)*
Fear of side-effects barrier (standardised)		0.25 (0.84)	−0.38 (1.11)*

Note: * p <.05, **p <.01.

Table 4
Multivariate associations of behavioural factors with vaccination intention.

Determinants	OR [CI]	P-value
Perceived susceptibility	2.80 [0.93–8.44]	0.068
Perceived severity	2.60 [0.92–7.39]	0.073
Medical and societal benefits	1.15 [0.72–1.84]	0.569
Personal practical benefits	1.42 [0.90–2.26]	0.135
Social norm barrier	0.66 [0.32–1.33]	0.244
Access barrier	0.97 [0.62–1.52]	0.901
Fear of vaccination barrier	0.56 [0.35–0.89]	0.014
Fear of side-effects barrier	0.47 [0.30–0.73]	<0.001

Note: Logistic regression analysis with all HBM factors entered in the model.

4. Discussion

We studied COVID-19 vaccination intention among the visitors to easily accessible vaccination facilities at markets in deprived neighbourhoods who ultimately did get vaccinated. Many respondents mentioned the convenience of an easily-accessible location nearby as the reason for their decision to get vaccinated. We also found that information from the family played a role in the decision to get vaccinated. The barriers related to fear of vaccination (in other words, the needle and pain) and of the side-effects of vaccination were negatively associated with vaccination intention.

We were particularly interested in the role of the convenience provided by the easily accessible vaccination facilities in order to lower the access barrier. The facility was established by medical professionals and it was accessible without an appointment for everyone. Although many people mentioned the convenience of the location in their answers to the open question in the survey, we did not find an association with the access barrier items in the questionnaire or vaccination intention. However, a review found that accessibility was a relevant factor in COVID-19 vaccine uptake in minority ethnic groups [21]. An explanation for the lack of an association in our study could be that the proximity of the vaccination location applied to all participants, and it was therefore not distinctive for our study group. Nevertheless, given the reasons stated by the respondents to the open question in our survey, access barriers could still play a role for low-income groups when it comes to being vaccinated against COVID-19 at more remote vaccination locations.

Our study shows that information from the family tends to influence the decision to get vaccinated, whether negatively by preventing relatives from being vaccinated, or in a positive way that encourages vaccination. Similar results were found in a study of a nationally representative sample in the United States by Kirzinger et al. [14].

Fear as a barrier played a significant role in our study with respect to vaccination intention. In other studies, fear of the side-effects of COVID-19 vaccinations [22] and needle fear [23] were also found to be relevant determinants of vaccine hesitancy. We found that fear of side-effects was the strongest predictor, followed by needle phobia and fear of pain. An explanation could be the critical phase at that time in the mass-vaccination programme for COVID-19 when persons aged 60 years and older were being invited to get vaccinated. News about the specific

side-effect of the AstraZeneca vaccine (low platelet counts), led to the Ministry of Public Health in the Netherlands and other countries temporarily suspending the availability of AstraZeneca [24,25]. Due to the high coverage of this news across the Netherlands and in Europe, people refused to be vaccinated when the campaign with this vaccine resumed. This could explain the strong correlation between vaccination intention and the fear of side-effects since the majority of respondents in our study were also aged 60 years and older.

Other research shows that the perceived threat of COVID-19 (in other words, susceptibility and severity) seems to be an important predictor of vaccine acceptance [26]. Vaccine acceptance is significantly higher in individuals with a higher risk perception and more anxiety [27]. The risk estimates for susceptibility and severity in our multivariate model are high, although not significant, indicating that the perceived threat of COVID-19 may have relevant importance for the market visitors. Despite the lack of a significant association, it is still important to take the perceived susceptibility to, and severity of, COVID-19 into account in the population of deprived neighbourhoods.

In our study group of visitors of vaccination locations at markets in deprived neighbourhoods, we did not find different distributions regarding vaccination intention when taking background characteristics such as gender, age, educational level and chronic disease into account, contrary to studies into populations of ethnic minorities or low and middle income countries [21,22]. An explanation may be the respondents of our study who eventually decided to be vaccinated, which differs from other studies that compared groups who were vaccinated or had the intention to get vaccinated with those who rejected to be vaccinated.

5. Strength and limitations

A strength of our study is that the participants consisted of a generally hard-to-reach group from deprived neighbourhoods. The vaccination gap due to vaccine hesitancy is high in this group and this study provides insights into the barriers to vaccination among visitors to walk-in locations. Since the survey was conducted immediately after vaccination, the recall risk was low. However, filling in the questionnaire just after being vaccinated could have led to the determinants of vaccination intention being underestimated.

A limitation is that the questionnaire was specifically designed for this setting, with a limited number of questions tailored to respondents not used to fill out questionnaires, even though questions were based on former research on the HBM. Validation of the questionnaire items will be required for application in future studies.

6. Implications for practice

The convenience of the location was mentioned as important reason to get vaccinated, and so we advise the elimination of the practical barrier of the effort to reach the location, and the organisation of vaccination in locations close to people living in deprived neighbourhoods, as a way of improving vaccination uptake. We also recommend facilitating tailored and reliable information about vaccines that targets, and involves, the family. This may help vaccine-hesitant people in their thinking about whether or not to be vaccinated.

The insight generated by our study into the barriers 'fear of side-effects' and needle phobia also supports the idea that there should be tailored interventions targeting deprived populations. Providing information and other interventions that address these fear barriers at vaccination facilities may reduce these anxieties. Our approach of organising easily accessible walk-in locations in public places, with physicians being present to provide information, is an example of an intervention of this kind. Moreover, public information campaigns targeting groups with low socio-economic status should address the fear of the side-effects of vaccines given the importance of this factor in vaccination decisions.

7. Implications for research

Qualitative and quantitative research is needed into the accessibility of vaccines for low-income groups and the role of specific barriers such as fear of side-effects and the influence of the social environment. Such research is relevant for designing future interventions to increase vaccination uptake in people living in deprived neighbourhoods. The effectiveness of interventions and policies to address vaccine hesitancy in deprived populations also merits further examination.

8. Conclusion

Our study shows that people visiting markets in deprived neighbourhoods attach importance to the accessibility of vaccination facilities and also to family views about the decision to get vaccinated and fear of COVID-19 vaccination. Interventions should address these factors to increase vaccination uptake.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A

Questionnaire items and scales

Survey questions and scales	Number of items	Items and answer categories
Motivation to get vaccinated	1	Why did you choose to get vaccinated here and now? *Open-ended question.*
Intention to get vaccinated	1	Did you already intend to get vaccinated? *Answer categories Yes, Doubt or No.*
Perceived susceptibility	1	What do you think the chance is of getting COVID-19 without being vaccinated? *Answer categories Very small, small, somewhat big, big or very big.*
Perceived severity	1	To what extent would the consequences of COVID-19 be severe if you were to get infected? *Answer categories Not at all severe, Not severe, Somewhat severe, Severe or Very severe.*

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Questionnaire items and scales

Survey questions and scales	Number of items	Items and answer categories
Medical-Societal benefits	4	Did the following benefits of vaccination influence your decision to get vaccinated?Being/feeling protected against COVID-19. Protecting people around me. Fulfilling the expectations of people around me. Helping society as a whole. *Answer categories Yes or No for each benefit.*
Personal-Practical benefits	3	Did the following benefits of vaccination influence your decision to get vaccinated? Regaining access to certain facilities or events. Opening up society as a whole. Be able to travel freely *Answer categories Yes or No for each benefit.*
Influence of information	4	To which extent did conversations or communications from the following people influence your decision to get vaccinated? Information from family Information from friends Information from the government Information from your physician *Answer categories Yes or No for each item.*
Social norm barrier	2	Did the following drawbacks influence your decision? Religious objections or beliefs that are not in line with vaccination.Disapproval of people around me. *Answer categories Yes or No for each drawback.*
Access barrier	2	Did the following drawbacks influence your decision? The time it takes to get vaccinated. The effort it takes to get vaccinated (for example hard to reach vaccination locations). *Answer categories Yes or No for each drawback.*
Fear of vaccination barrier	2	Did the following drawbacks influence your decision? Pain of vaccine injection. Fear of needles or injections. *Answer categories Yes or No for each disadvantage.*
Fear of side-effects barrier	1	Did the following drawbacks influence your decision? Fear of potential side-effects (serious or otherwise). *Answer categories Yes or No.*

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