



COVID-19 Vaccination Uptake

**A study of Knowledge, Attitudes and
Practices of Marginalized Communities in
Iraq**

August 2021



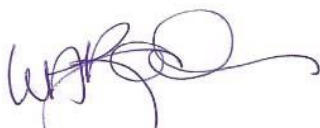
ACKNOWLEDGMENT

This study would not have been possible without the input and support of many people and CARE Iraq thanks and acknowledges all those who have contributed to this.

Mr Wasi Haider and his team from CRSM Consulting worked tirelessly to conduct the data collection, analysis and provide the report in a very short time frame.

Thanks to Dilman Hameed Amo, CARE Iraq's MEAL Coordinator and Emebet Dlasso Menna, CARE Iraq's Programme Quality and Development Manager, for their knowledge and leadership that brought this study to fruition as well as Dr. Omar Noaman Saleh, Dr Seta Anuchuan Jojan and the Health Programme Team at CARE Iraq who put in the hard groundwork in the lead up to this report. Appreciation and thanks are extended to the respective Directorates of Health Dohuk and Ninewa for their interest in this study and providing the necessary support.

To all other staff from CARE Iraq, CARE Germany and CARE USA for their various and valuable inputs, we acknowledge your contribution. This study was conducted with funds from CARE International USA.



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CONTENTS

<u>LIST OF ACRONYMS</u>	<u>4</u>
<u>EXECUTIVE SUMMARY</u>	<u>5</u>
<u>METHODOLOGY</u>	<u>9</u>
<u>Data Collection Phase</u>	<u>10</u>
<u>Reporting Phase</u>	<u>11</u>
<u>SAMPLING</u>	<u>12</u>
<u>DETAILED FINDINGS</u>	<u>13</u>
<u>Knowledge</u>	<u>13</u>
<u>Attitudes</u>	<u>43</u>
<u>Practices</u>	<u>50</u>
<u>CONCLUSIONS</u>	<u>56</u>
<u>RECOMMENDATIONS</u>	<u>57</u>

LIST OF ACRONYMS

CARE	Cooperative for Assistance and Relief Everywhere
CII	Care International in Iraq
COVID-19	Corona virus disease -19
CRSM	CRSM Consulting (Consulting Company)
DoH	Directorate of Health
FGD	Focus Group Discussion
IDP	Internally Displaced Person
KAP	Knowledge, Attitude and Practice
KII	Key Informant Interview
KRI	Kurdistan Region of Iraq
MEAL	Monitoring, Evaluation, Accountability and Learning
MoH	Ministry of Health
NGO	Non-Governmental Organization
PCR	Polymerase Chain Reaction (COVID-19 Test)
PHCC	Primary Health Care Center
WHO	World Health Organization

EXECUTIVE SUMMARY

Whilst many countries were unprepared for the COVID-19 pandemic, Iraq has been hugely affected due to its decimated health system. The levels of COVID-19 infection rates in Iraq continue to put enormous pressure on hospitals, intensive care units, health workers, and national resources.

At the time of the study, in mid-July there were more than 1.47 million confirmed cases, 17,751¹ deaths and a very low rate of vaccination. While preventive measures can effectively reduce transmission, their effectiveness always depends on the population adhering to these measures. With this not happening, high rates of vaccination need to be the major nationwide goal to win the battle against the pandemic.

Although vaccination rates are increasing in Iraq there is still an extremely high resistance from a large segment of the population primarily due to the significant amount of misinformation circulating amongst public, a lack of knowledge on vaccines and access to the vaccination process – from registering to receiving. This is very apparent in those marginalized segments of the community- the displaced both IDPs and refugees, women, and those from lower socio-economic groups. As vaccination efforts continue, it is critical to increase people's confidence in the COVID-19 vaccines to fight the COVID-19 pandemic.

CARE Iraq conducted a study to better understand community acceptance of COVID-19 vaccination and existing barriers to vaccine uptake. The objectives of the study were to create an understanding of people's knowledge, attitudes and perceptions about COVID-19 and the vaccines, establish what reasons undermine the COVID-19 vaccination campaign and inform about the status of vaccine uptake among marginalized communities. The results of the study can inform policy makers and health actors to design awareness campaigns and address barriers to vaccine uptake to increase the vaccination rate.

CARE conducted interviews with 3,770 people (2,067 men and 1,703 women) in Ninewa and Duhok Governorates in mid-July 2021. The study specifically looks at the needs of marginalized people including refugees, IDPs, returnees and host communities. The quantitative interviews were complemented with qualitative data from 16 community focus group discussions and 34 interviews with key health personnel.

CARE found that:

- Vaccine hesitancy is high. 67% of men and 68% of women say they are not willing to receive a COVID-19 vaccine. 52% of men and 48% of women think the vaccine is safe.
- Women have less access to and knowledge of COVID-19 vaccines than men. 50% of men and 30% of women know how to register for a vaccine. 51% of women and 32% of men say that vaccine availability is the biggest barrier to access. Women, religious leaders, and daily wage laborers are least likely to have correct information about COVID-19, vaccines, and side effects.
- Fear of side effects is the biggest obstacle. For people who are not willing to get a vaccine, their biggest concern is fear of side effects such as fever, death, severe allergic reactions, and infertility.
- There is little trust in the vaccines. One of the most common reasons people give for

¹ WHO Dashboard

not being willing to get a vaccine is that they do not believe the vaccines are designed to prevent COVID-19. Another common fear is that the vaccines are counterfeit.

- People are not confident they have enough accurate information. Many people are not sure that there is enough evidence that the vaccines are safe.
- Social media can be a primary channel for vaccine messaging. 60% of men and 46% of women say that social media is their main source of information surrounding COVID-19 and vaccinations.

Key recommendations

- Those involved in vaccination roll outs must ensure community preparedness for, trust in, and access to vaccines. This means reaching the most marginalized and overcoming gender and other barriers to vaccination.
- The poorest communities of Iraq cannot be at risk from missing out on vaccinations. Adequate funding needs to be secured to ensure vaccination equity.
- Counter misinformation with awareness campaigns. Awareness campaigns, dialogue and engaging with the communities are key to ensure that people can make an informed choice. Social media is one of the best means to counter misinformation.
- Messaging needs to focus especially on women, daily wage laborers and religious leaders.
- Awareness campaigns need to be tailored specifically for different segments of the community. Knowledge and attitudes vary differently between the various communities. A blanket awareness campaign will unlikely be successful.
- The use of trusted people from the various communities, celebrities, religious leaders, influential politicians, health officials and such like receiving vaccinations or leading awareness campaigns could help raise trust levels around the safety of the vaccines.
- Access to vaccination procedures need to be simplified and made easier. This relates to the registration process, and accessibility to vaccinations centers especially for those who are displaced and women.
- Efforts should be made for all types of COVID-19 vaccines to be available with enough information, for people to make a choice, about each to encourage uptake. Particular vaccines should not be forced upon certain community segments.
- Better communication from the Ministry of Health to all those involved in the administration of the COVID-19 vaccinations, to ensure they have up to date and accurate information as knowledge around the vaccine evolves e.g. cold chain, time between doses.

Demographics

The data was collected from 3770 individuals through survey, 34 individuals through KKI's interviews and from 128 Individuals through 16 FGDs, 2 per location (1 male and 1 female). The details of data collection is given hereunder:

Distribution of Sample Size

Governorate	Male	Female	Total
Duhok	991	1,065	2,056
Ninawa	1,076	638	1,714
Total	2,067	1,703	3,770
Percentage	55%	45%	100%

Dohuk Governorate					
Locations	Male	Percentage	Female	Percentage	Total
Duhok City	210	21%	212	20%	422
Sumel	432	44%	471	44%	903
Zakho	283	28%	300	28%	583
Amedi	66	7%	82	8%	148
Total	991	100%	1065	100%	2,056

Ninawa Governorate					
Locations	Male	Percentage	Female	Percentage	Total
Mosul	408	38%	225	35%	633
Sinjar	246	23%	186	29%	432
Talafer	236	22%	87	14%	323
Zummar	186	17%	140	22%	326
Total	1,076	100%	638	100%	1,714

Community Segments

Duhok Governorate						
Community Segment	Male	Percentage	Female	Percentage	Total	Percentage
Host Community (Rural)	133	13%	129	12%	262	13%
Host Community (Urban)	192	19%	178	17%	370	18%
IDPs (Out of Camps)	276	17%	127	12%	295	14%
IDPs (In Camps)	276	28%	335	31%	611	30%
Refugees (In Camps)	68	7%	152	14%	220	11%
Refugees (Out of Camps)	154	16%	144	14%	298	14%
Total	991	100%	1,065	100%	2,056	100%

Ninewa Governorate						
Community Segment	Male	Percentage	Female	Percentage	Total	Percentage
Host Community (Rural)	209	19%	122	19%	331	19%
Host Community (Urban)	330	31%	228	36%	558	33%
Returnees	433	40%	201	31%	634	37%
IDPs (Out of Camps)	57	5%	56	9%	113	7%
IDPs (In Camps)	47	5%	31	5%	78	4%
Total	1076	100%	638	100%	1714	100%

Age Groups

Duhok Governorate						
Age Group	Male	Percentage	Female	Percentage	Total	Percentage
18-30	440	44%	530	50%	970	47%
31-40	224	23%	234	22%	458	22%
41-50	159	16%	136	13%	295	15%
50-60	106	11%	99	9%	205	10%
60+	62	6%	66	6%	128	6%
Total	991	100%	1065	100%	2056	100%

Ninewa Governorate						
Age Group	Male	Percentage	Female	Percentage	Total	Percentage
18-30	630	59%	301	47%	931	54%
31-40	247	23%	173	27%	420	25%
41-50	99	9%	89	14%	188	11%
50-60	74	7%	55	9%	129	7%
60+	26	2%	20	3%	46	3%
Total	1076	100%	638	100%	1714	100%

METHODOLOGY

An exploratory and anonymous population-based survey was conducted among individuals aged above 18 years. The survey coincided with the implementation of COVID-19 vaccinations programs in Iraq. Thus, rather than being a hypothetical study of knowledge, attitudes and perceptions, this study aims to capture real-world evidence to inform CARE International, the respective Ministries of Health within Iraq and the World Health Organization (WHO), on how best to implement vaccination programs.

A participatory and mixed-method approach was used to conduct this study. All the important segments of the population were included (students, employees, business owners, housewives, daily wage earners (Daily wagers), shop keepers, religious leaders, Mukhtars etc.) in the research so as to have all-inclusive data, analysis, interpretation and reporting. Following is the step-by-step method used to conduct this research.

Inception Phase

Desk Review

The consultant studied the relevant research conducted in recent months in Ninewa and Duhok to gain an understanding of the research context and updated COVID-19 situation. The secondary research included a weekly situation report on COVID-19 by the WHO, updates about COVID-19 vaccination by the WHO, and updates from the Iraq MoH about vaccination drives. The target groups for this study were different segments of the general public in two Governorates - Duhok and Ninewa. To have a representative sample of the society, the study included the local community, refugees and IDPs, business owners, religious leaders and community leaders (Mukhtars). The other segments of society included university students, doctors from hospitals and vaccination centers, CARE project staff and health cluster members from both Governorates. The segmentation took into account different Occupations including students, employees, and housewives. The details of the numbers of respondents from each segment in the sample size is provided in the tables in the section "Distribution of Sample Size" above.

Data Collection Tools

After the secondary research, data collection tools were developed in conformity with the objectives of the study and reviewed by CARE. These tools ensured adequate participation from all segments of society and the collection of counterfactual data so that results can be considered to be representative of the wider body of the target population and therefore statistically significant.

The research tools include the following:

Survey

The survey was conducted with different segments of society, with people from different ages and religious/ethnicity backgrounds. Including these different groups was considered essential when comparing attitudes, knowledge, and practices across communities. The sample size for survey was 3,500 (1750 male and 1750 female) however the team finally conducted a survey of 3,770 (2067 male and 1703 female) respondents from both Governorates.

Focus Group Discussions (FGDs)

In order to collect qualitative data, a semi-structured questionnaire was developed for the focus group discussions. Counterfactual data was collected against each question and the participants of FGDs had the opportunity to disagree with each other and come-up with divergent views and knowledge. FGDs were conducted with male and female respondents at each location with 8 participants in each group. The gatherings followed the COVID-19 preventative measures communicated by CARE. In total, there were 8 FGDs in each Governorate (4 male and 4 female).

Key Informant Interview (KIIs)

KIIs were conducted with doctors and staff in Primary Health Care Centers and vaccination centers, Mukhtars, CARE project staff (Health), Health Cluster Members, and DoH staff. The purpose of the KIIs was to get an in-depth understanding of attitudes and perceptions of barriers that may hinder access to vaccinations.

Data Collection Phase

Training of Enumerators

Training of enumerators commenced once the data collection tools were approved by CII and translated into Arabic and Kurdish. 65 (33 male and 32 female) local enumerators were employed to collect the data. The training of enumerators included;

- Understanding the purpose of the study and data collection tools.
- Standard operating procedures (SOPs) for collecting data using smartphones or tablets.
- Data collection protocols to ensure data quality.

After the training, there was a mock-up for data collection to adjust the tools and to calculate the required time to complete data collection.

Data Collection

A data collection field plan was developed that included dates, location, number of surveys/KIIs/FGDs at each location and name of the enumerator(s).

The data was collected from various locations using KOBO toolbox, - a data collection application. The locations included hospitals, refugee and IDP camps, IDP informal settlements in urban areas, colleges/universities, vaccination centers, community centers being run by different NGOs, rural and urban markets.

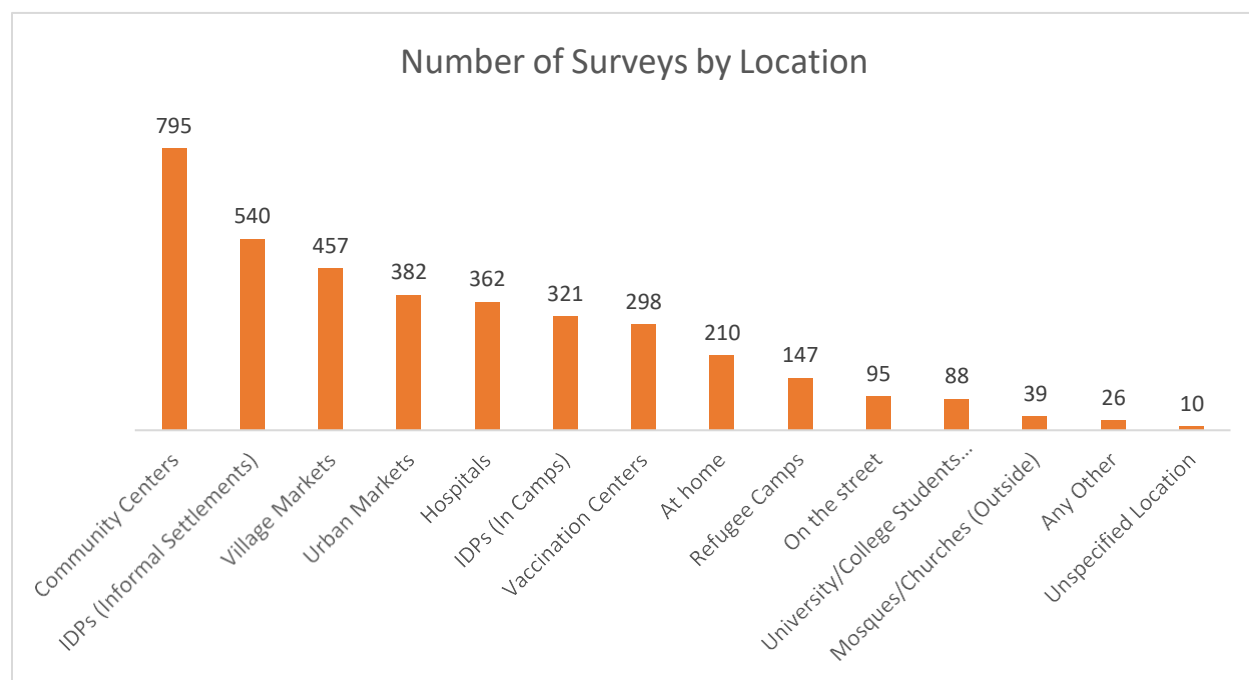


Chart 1 Number of Surveys By Location

Data Cleaning, Translation and Submission

After the data was collected, the enumerators cleaned the data to remove spaces, fixing or removing incorrect, corrupted, incorrectly formatted, duplicate, or incomplete data within the dataset. The data was also translated at this stage before submission. An enumerator reviewed the data to ensure its quality as per quality standards and submitted the data online.

Reporting Phase

Data Analysis

The data was analyzed using percentages and cross tabulation (for comparison between different variables) to understand the prevailing knowledge, perceptions, and reasons for the community members to accept or not the vaccination as a preventive measure against COVID-19. MS Excel was used for most of the analysis to draw percentages and to see the pattern of responses of the quantitative data,

Research Report

The research report was prepared based on analysis of primary data and study of secondary data and includes findings and recommendations. The report was updated to integrate feedback from CARE International staff with the final report submitted to CARE International in Iraq.

SAMPLING

A stratified random sampling method was used to select the respondents from the pre-identified community segments. The sample size was set at 3,500 (1,500 from Ninewa and 2,000 from Duhok) with equal number of men and women, however, data was collected from 3,770 (2056 from Duhok and 1714 from Ninewa, 2067 males and 1703 females) respondents of the survey. In addition, 128 (64 from each Governorate of Duhok and Ninewa, male and female in equal proportion) participants took part in FGDs. Further, 34 (12 from Duhok and 22 from Ninewa) KKIs were conducted with key informants including doctors from hospitals and vaccination centers, CARE project staff, Mukhtars, and Health Cluster members.

The data was collected from 4 districts in each governorate, namely:

Duhok Governorate	Ninewa Governorate
Duhok City	Mosul
Sumel	Sinjar
Zakho	Talafer
Amedi	Zummar

The data was collected from different community segments from both Governorates, especially vulnerable groups. These segments included:

- IDPs (In Camps)
- IDPs (Out of Camps)
- Refugees (In Camps)
- Refugees (Out of Camps)
- Host Community (Urban)
- Host Community (Rural)
- Returnees (Ninewa)

The data collection from these community segments was conducted in urban and rural markets, IDPs in camps and from informal settlements, refugees in camps and in urban settlements, COVID-19 vaccination centers and patients at primary healthcare hospitals.

DETAILED FINDINGS

Knowledge

Respondents' knowledge on the characteristics, symptoms, and complications of COVID-19

The knowledge of the community was assessed by considering the following areas:

- Spreading and symptoms of COVID-19.
- Vulnerability of people to COVID-19.
- Complications resulting from COVID-19 and how to keep safe.

Spreading of COVID-19:

According to the survey, 60% (n=3770), (64% male and 55% female) of the respondents knew how COVID-19 was spread. The area-wise distribution of knowledge as to how COVID-19 spreads indicates that 66% (n=3770, 70% male and 63% female) of the respondents in Duhok and 52% (n=3770, 60% male and 43% female) of those in Ninewa understood how the disease was spread. The level of knowledge in each target location and Governorate, along with gender segregation, is presented in the charts below.

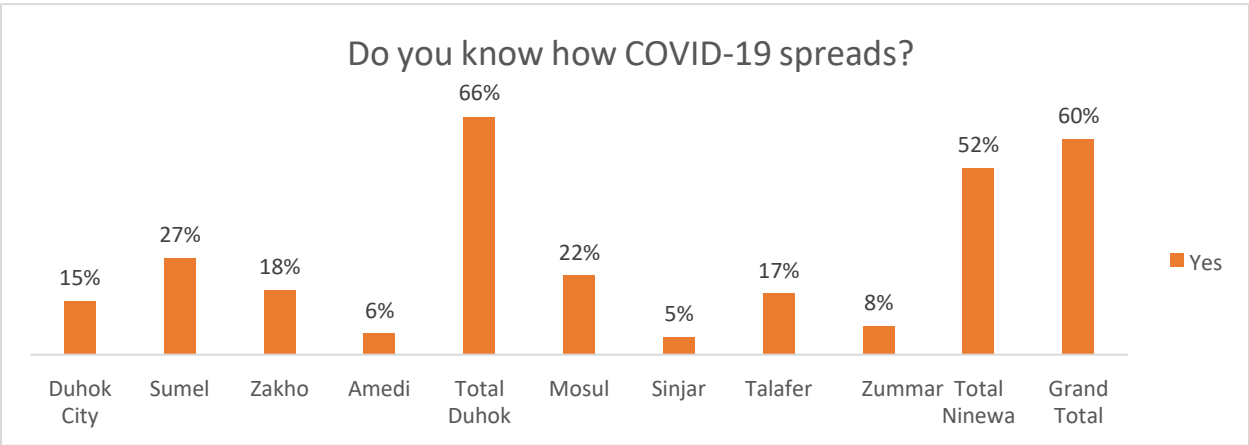


Chart 2: Do you know how COVID-19 spreads? - Locations

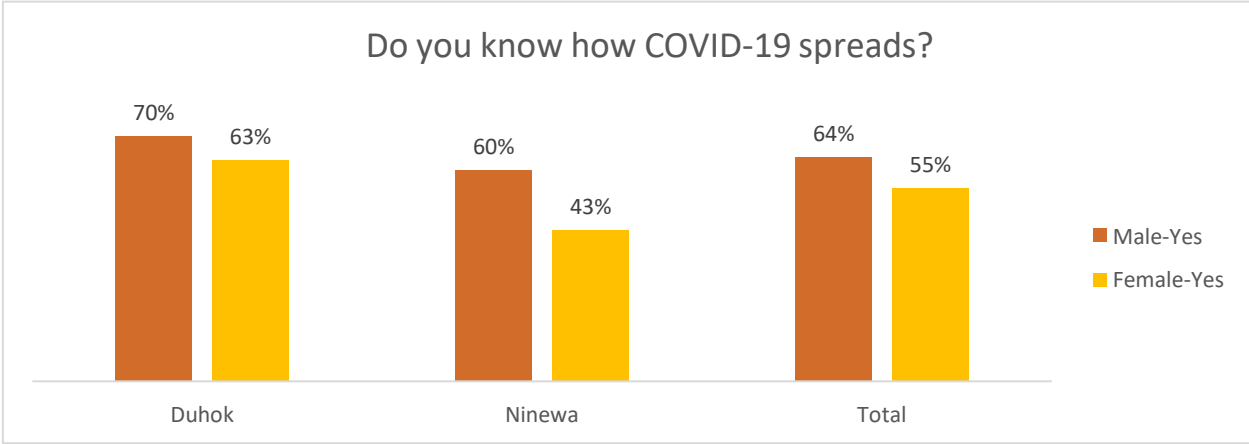


Chart 3: Do you know how COVID-19 spreads? - Gender by Governorate

Semi-literates (those with limited school education, usually less than 5 years of education) male and female respondents showed lower levels of understanding, 45% (n=3770), than did those who were illiterate (those with no formal education) (51%) (n=3770).

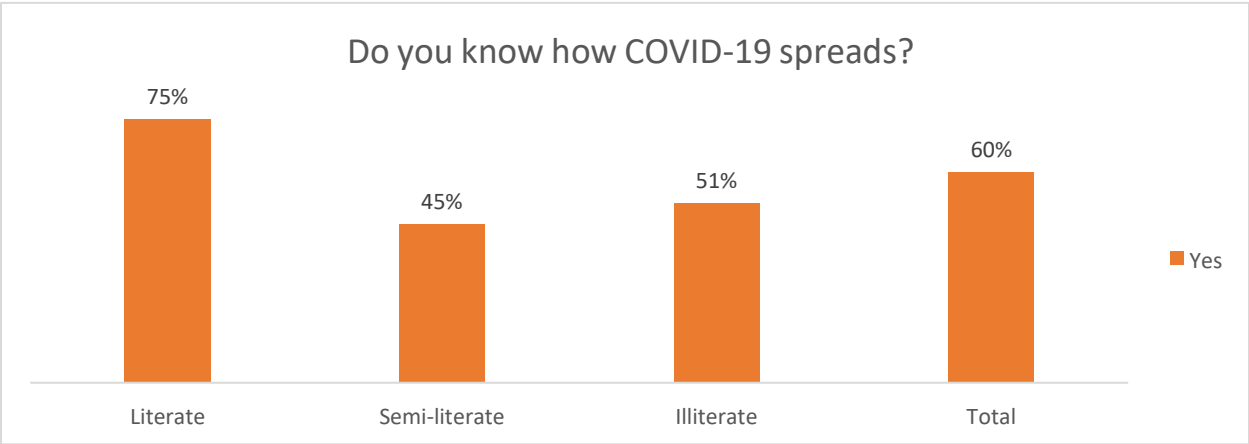


Chart 4: Do you know how COVID-19 spreads? – Literacy Level

In relation to employment status, housewives and those on a daily wage had the least knowledge about the spread of COVID-19. The data shows that 49% (n=1185) of housewives, and 47% (n=472) of those on a daily wage stated they knew how COVID-19 is spread and were able to explain correctly how the disease spread. The percentages among respondents of different Occupations are shown in the chart below.

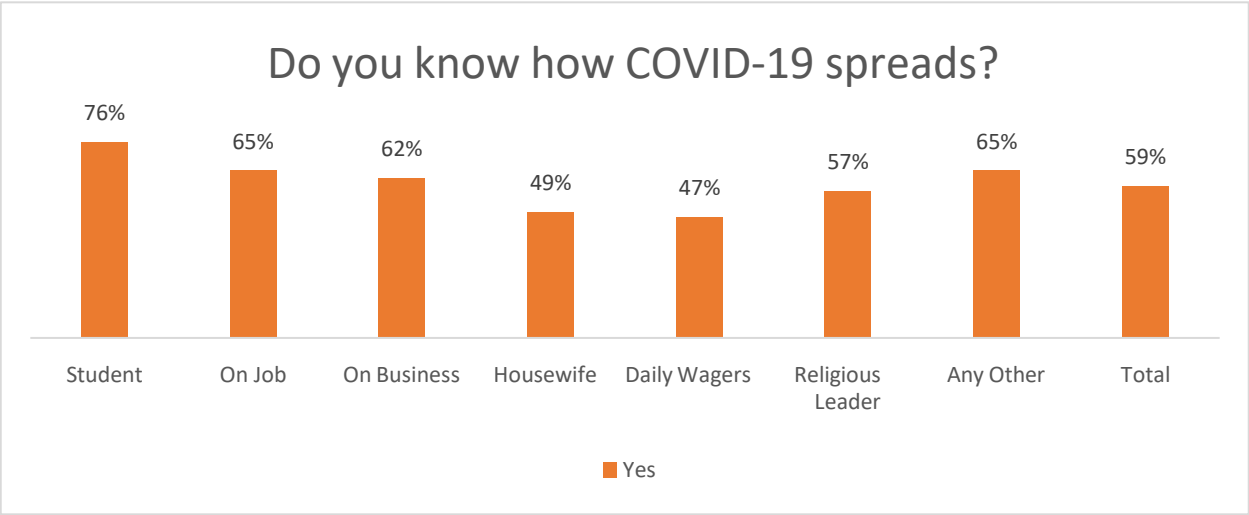


Chart 5: Do you know how COVID-19 spreads? - Occupation

As regards to age groups, those over 60 years showed less knowledge as to how COVID-19 spreads in comparison with those from other age groups. The survey shows that 48% (n=174) of those over 60 (54% of males and 46% of females) understood how COVID-19 was spread. Analysis shows that younger people have more knowledge of how the disease spreads.

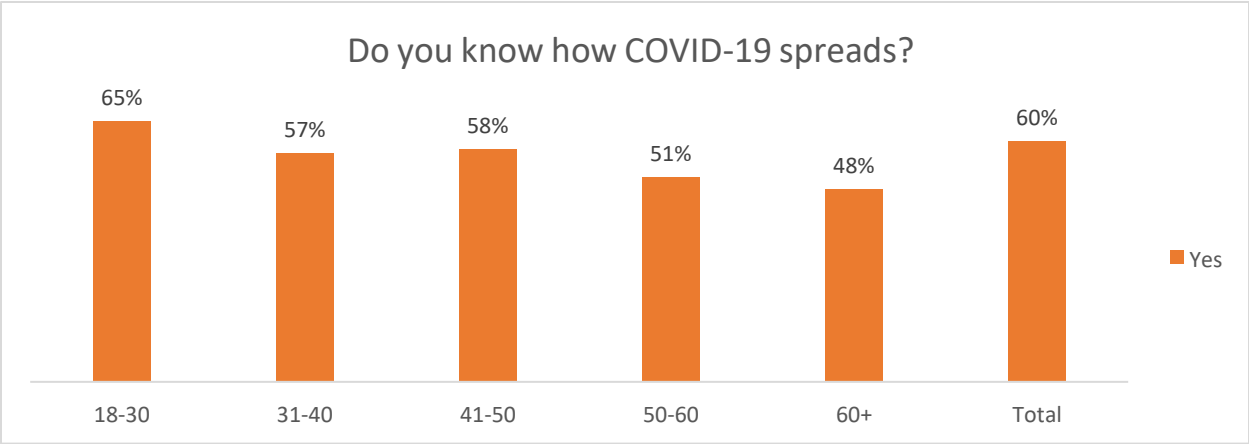


Chart 6: Do you know how COVID-19 spreads? – Age Group

The data shows that IDPs in different locations have the least knowledge of how COVID-19 spreads at 50% (n=1097), followed by the returnees at 54% (n=634).

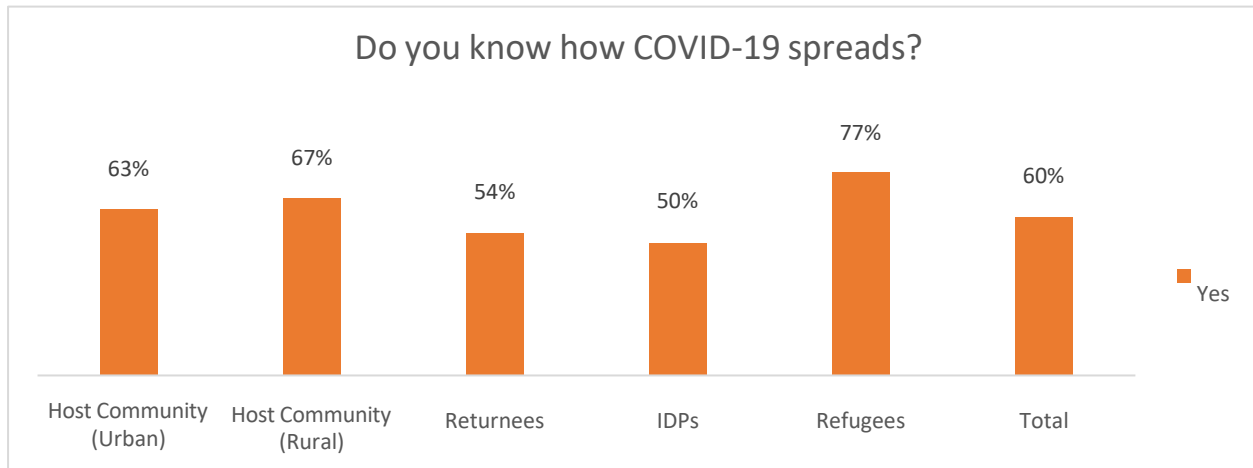


Chart 7: Do you know how COVID-19 spreads? - Community Segment

Symptoms of COVID-19:

Overall, the majority respondents 72% (n=3770, 79% from Duhok and 65% from Ninewa) knew the symptoms of COVID-19. As regards to gender, 76% of males (n=2067, 79% from Duhok and 72% from Ninewa) and 69% (n=1703) of females (79% from Duhok and 65% from Ninewa) knew about the symptoms of COVID-19.

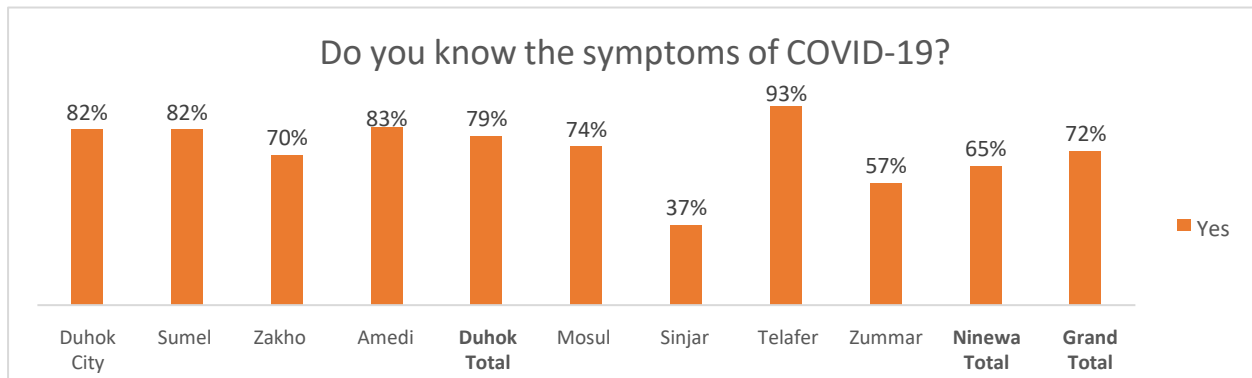


Chart 8: Do you know the symptoms of COVID-19? - Locations

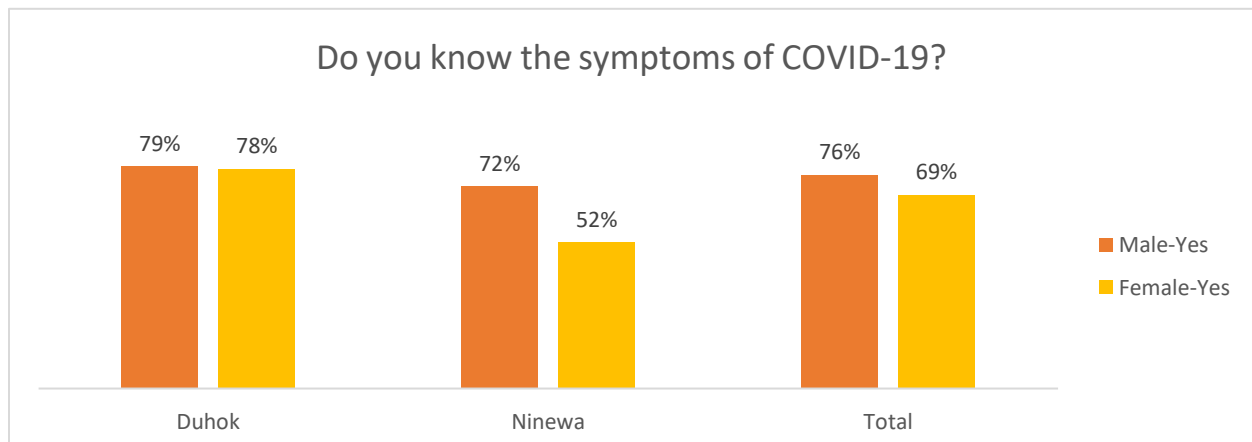


Chart 9: Do you know the symptoms of COVID-19? - Governorate

The survey revealed that semi-literates, 62% (n=1065), had less knowledge about symptoms compared with illiterates, 66% (n=1033).

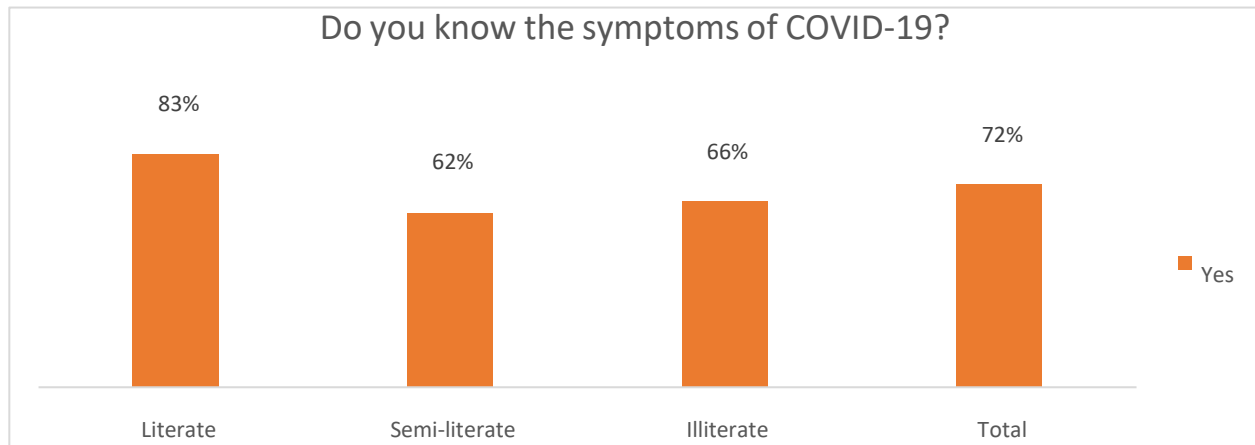


Chart 10: Do you know the symptoms of COVID-19? - Literacy Level

The data suggests that daily wage workers 63% (n=472), and housewives, 65% (n=1185), had less knowledge than people from other occupations.

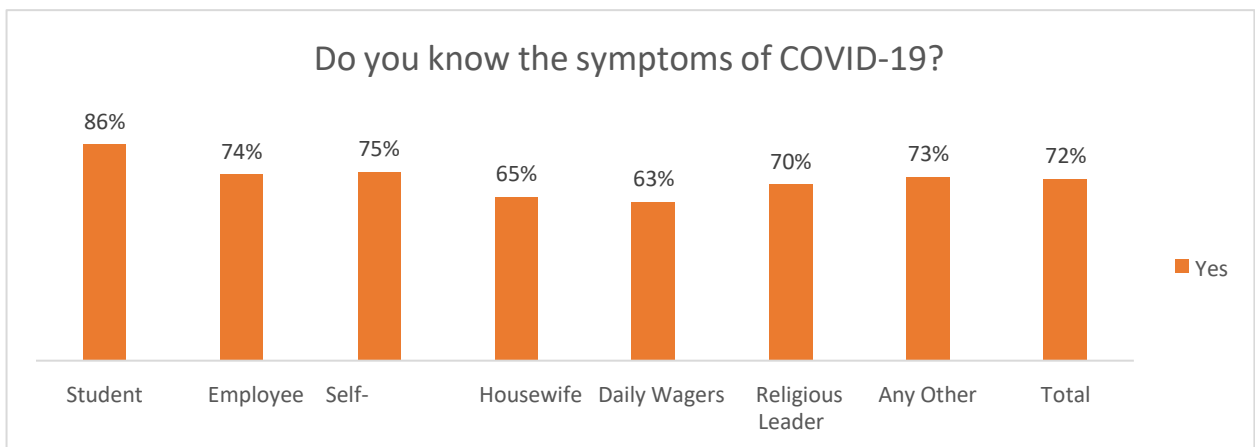


Chart 11: Do you know the symptoms of COVID-19? - Occupation

Overall, people from higher age groups had less knowledge than those from lower age groups, as shown in the chart below.

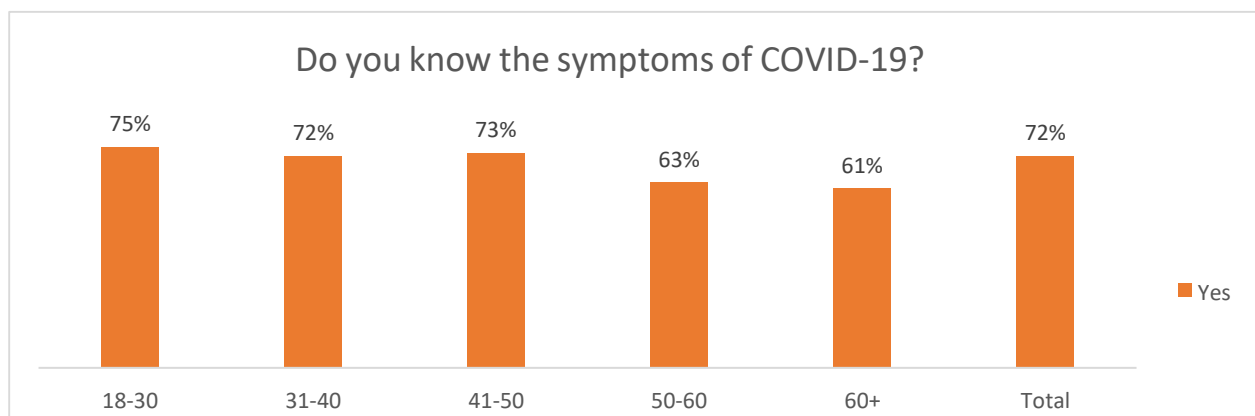


Chart 12: Do you know the symptoms of COVID-19? - Age Group

Returnees and IDPs had least knowledge about symptoms of COVID-19 with 65% (n=634) and 68% (n=1097) respectively.

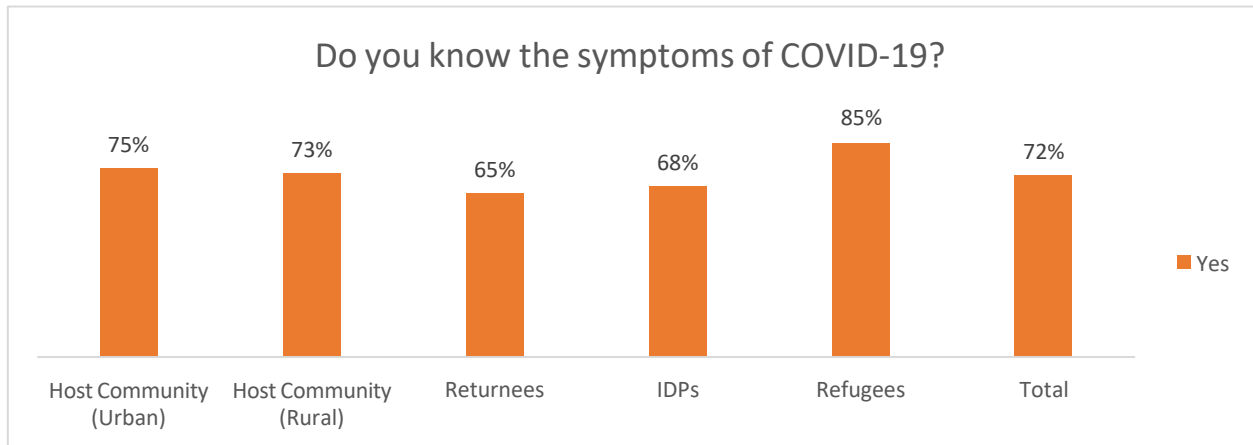


Chart 13: Do you know the symptoms of COVID-19? - Community Segment

Vulnerability to COVID-19?

The respondents were asked about their knowledge of vulnerability (higher risk of being infected with COVID-19). The majority of respondents 56% (n=3770, 58% in Duhok and 53% in Ninewa) knew who was most vulnerable to the disease. As regards to gender, 58% (n=2067), of male and 53% (n=1703) of female knew about who is more vulnerable to COVID-19. When comparing the level of knowledge among people of different districts, people from Amedi 78%, (n=148), and Duhok city 66%, (n=422) had more knowledge of vulnerability compared with those from Sumel and Zakho, with 54% (n=903), and 52% (n=583) respectively.

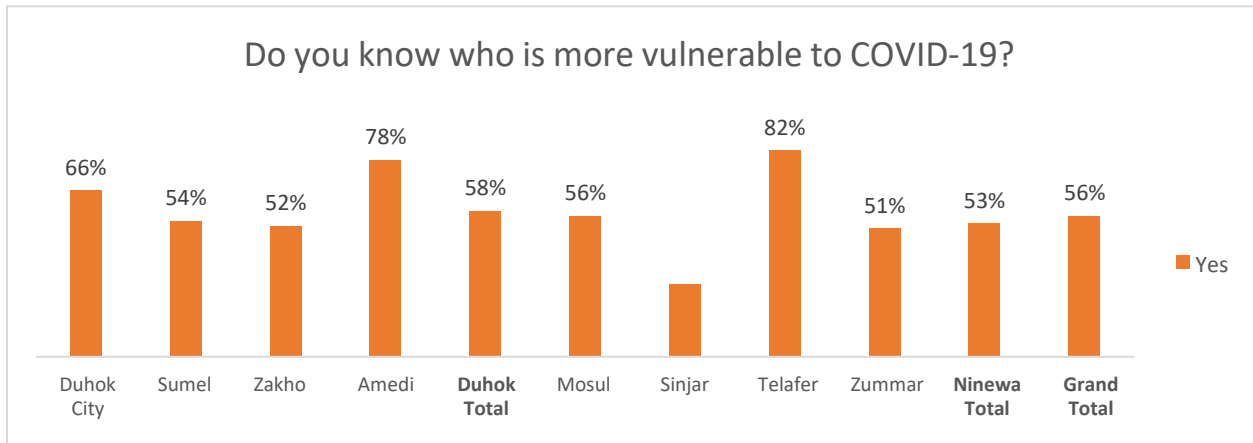


Chart 14: Do you know who is more vulnerable to COVID-19? - Locations

When segregating by genders, 58% (n=2067) of males and 53% (n=1703) of females knew about vulnerability.

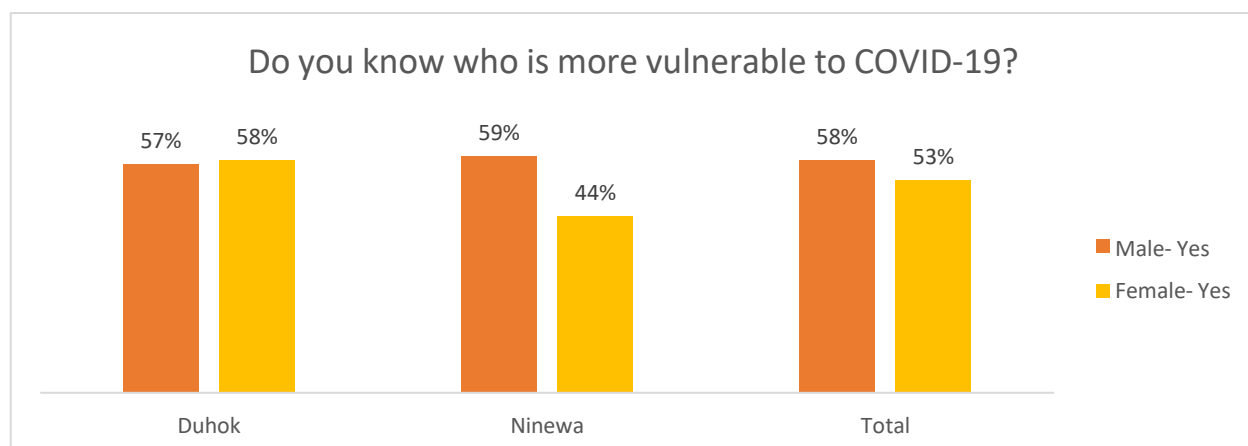


Chart 15: Do you know who is more vulnerable to COVID-19? – Gender by Governorate

Semi-literate people, 42% (n=1065) had less knowledge about vulnerability compared with illiterate people at 47% (n=1033). The chart below shows the percentages of community groups, segregated by level of literacy, having knowledge about vulnerability of people to COVID-19.

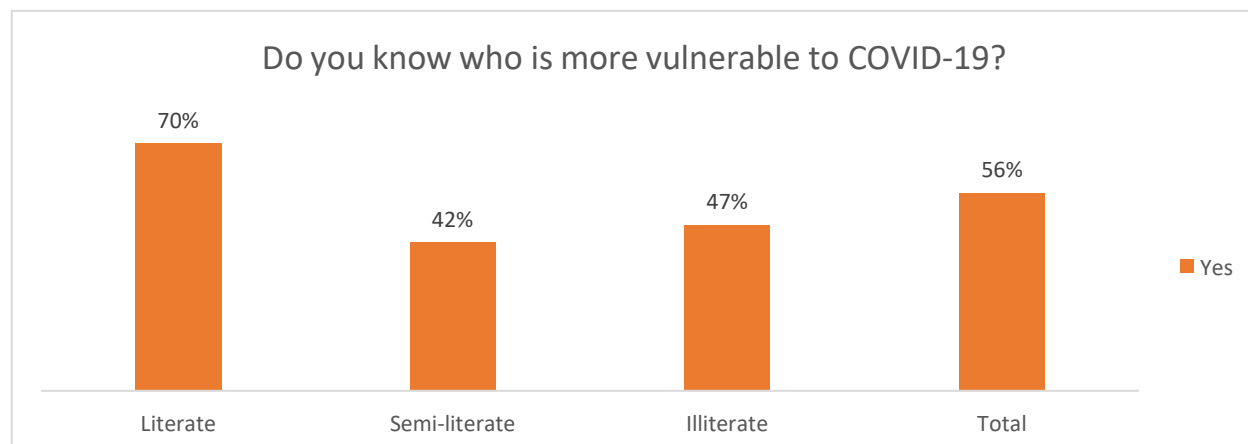


Chart 16: Do you know who is more vulnerable to COVID-19? - Literacy Level

Religious leaders, 35% (n=23) and those on a daily wage, 40% (n=472) showed less understanding about vulnerability to COVID-19, than those in other occupations.

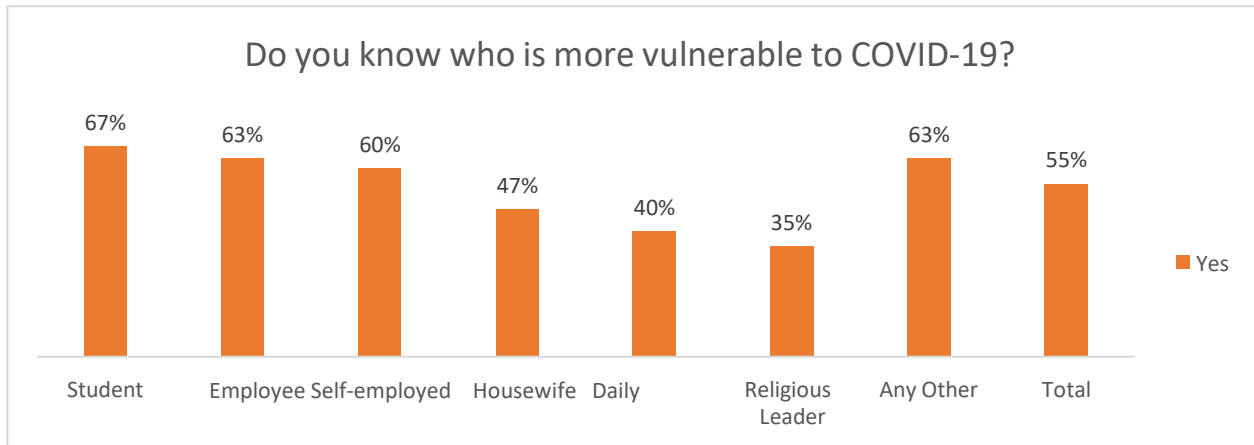


Chart 17: Do you know who is more vulnerable to COVID-19? - Occupation

Regarding differences in knowledge by age, people from higher age groups had less knowledge compared to those of lower age groups.

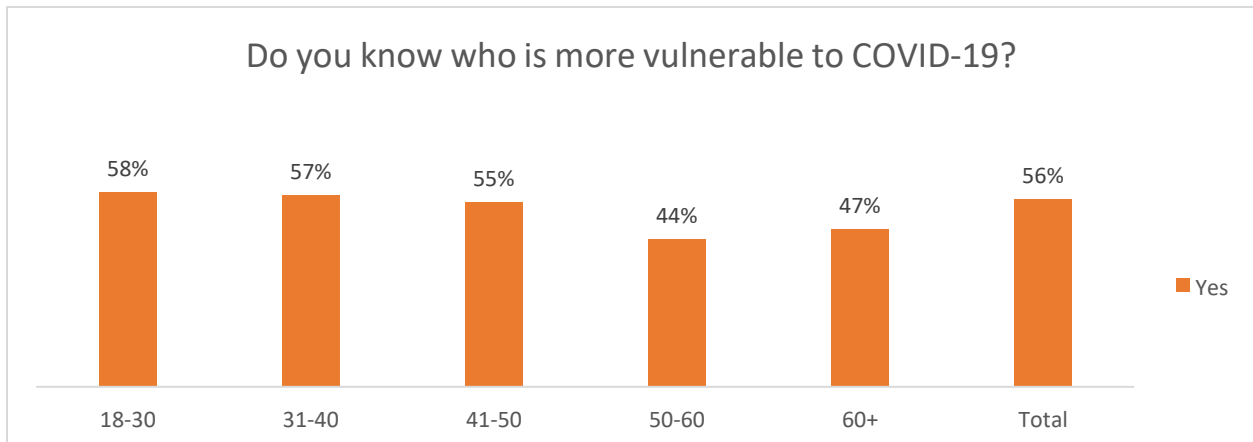


Chart 18: Do you know who is more vulnerable to COVID-19? – Age Group

When assessing the knowledge about vulnerability, 47% (n=1097) of IDPs and 49% (n=593) of rural host communities had knowledge about vulnerability to COVID-19 which was the lowest level compared to the other community groups.

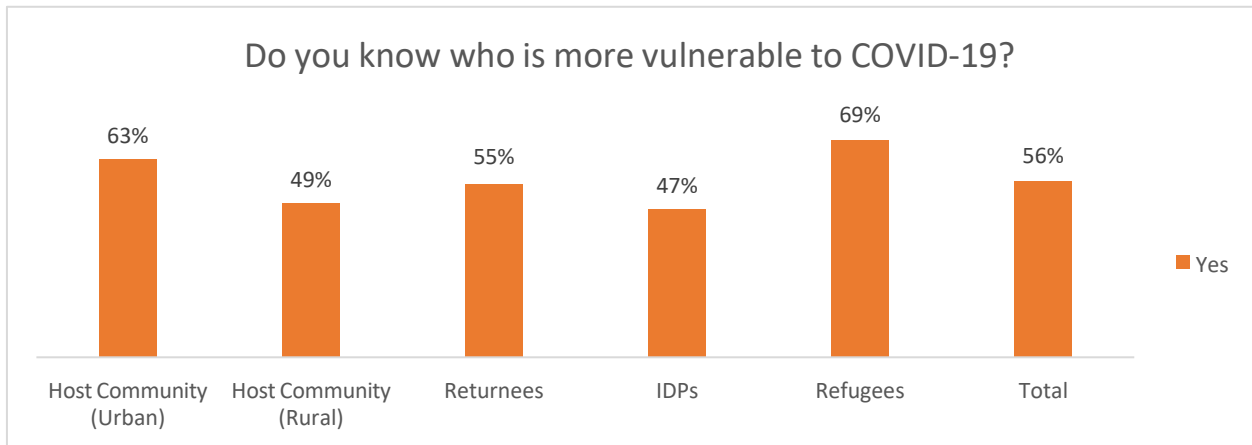


Chart 19: Do you know who is more vulnerable to COVID-19? – Community Segment

Complications resulting from COVID-19?

It is important for the population to know about the complications arising as a result of COVID-19 infections.

Most people, 57% (n=3770, 58% from Duhok and 56% from Ninewa) knew the complications resulting from COVID-19. The percentages of respondents from different locations with the knowledge, about complications resulting from COVID-19, is given in the chart below.

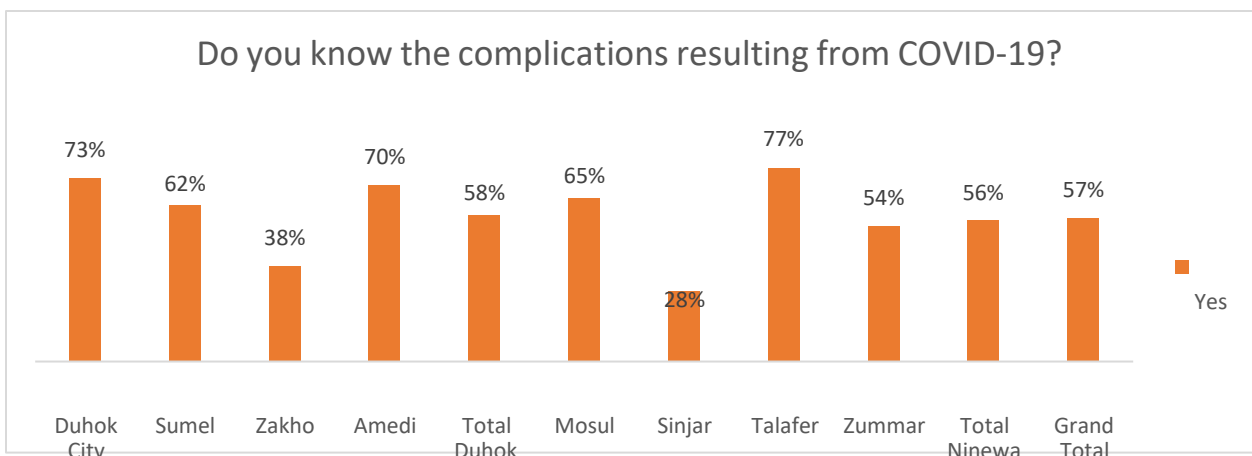


Chart 20: Do you know the complications resulting from COVID-19? - Locations

60% (n=2067) of males (57% from Duhok and 62% from Ninewa) and 53% (n=1703) females (58% from Duhok and 45% from Ninewa) knew about the complications resulting from COVID-19.

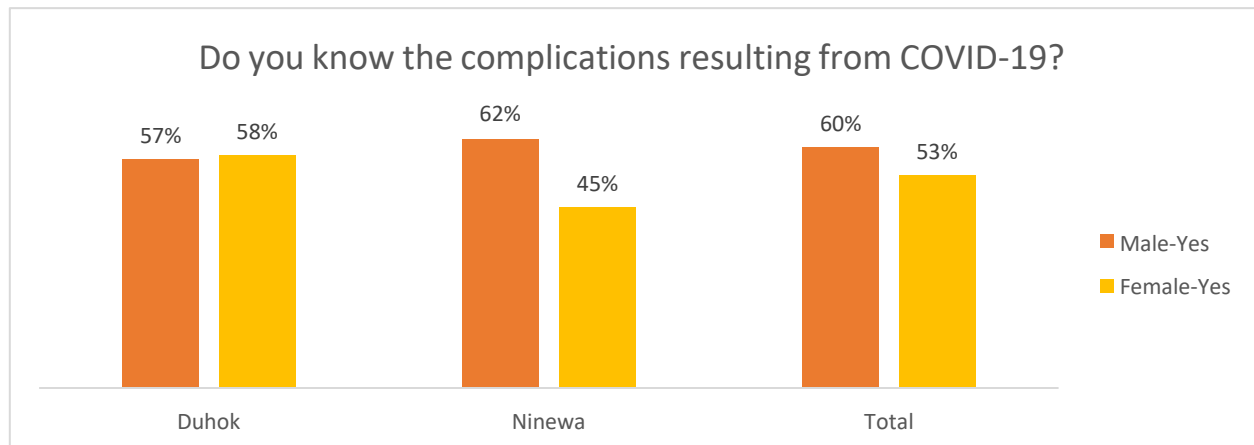


Chart 21: Do you know the complications resulting from COVID-19? – Gender by Governorate

When comparing groups of different educational levels, semi-literates had less knowledge about complications resulting from COVID-19 compared with illiterates at 46% (n=1065) and literates 68% (n=1033) respectively.

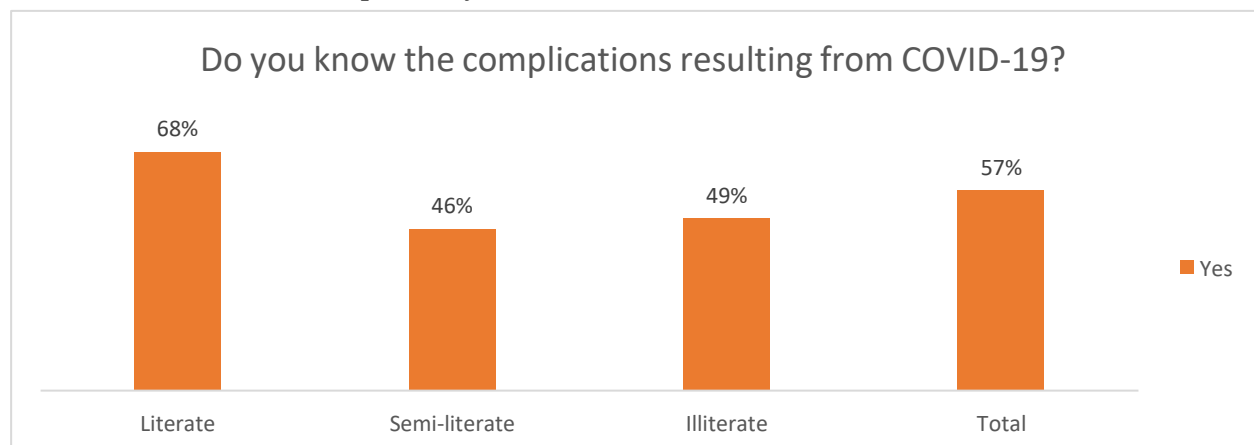


Chart 22: Do you know the complications resulting from COVID-19? – Literacy Level

Religious leaders, 48% (n=23), and housewives, 50% (n=1185), had least knowledge than people from other occupations. In addition, people from higher age groups had less knowledge compared to the people from lower age group.

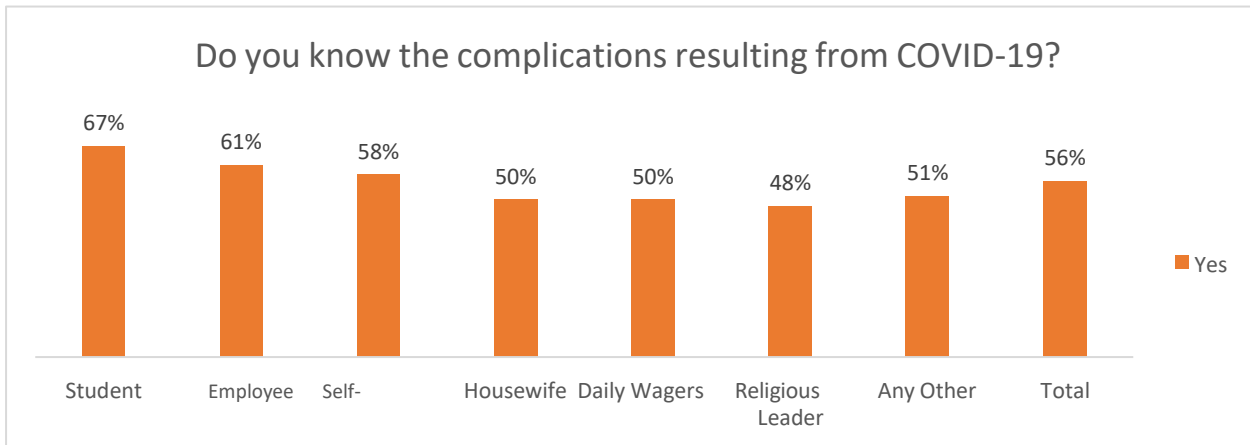


Chart 23: Do you know the complications resulting from COVID-19? - Occupation

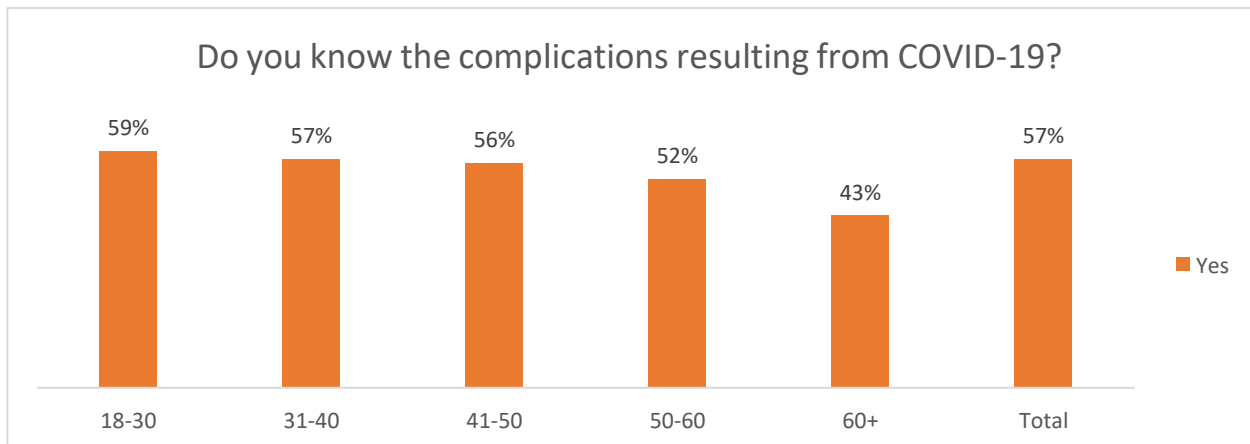


Chart 24: Do you know the complications resulting from COVID-19? - Age Group

Furthermore, 50% (n=1097) of IDPs and 51% (n=634) knew the complications arising from COVID-19.

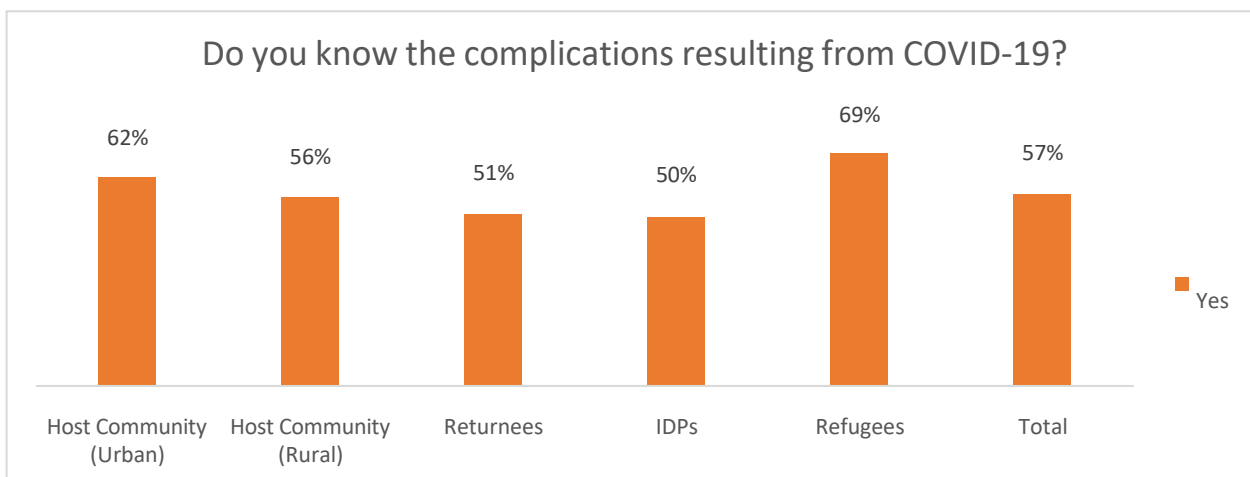


Chart 25: Do you know the complications resulting from COVID-19? - Community Segment

How to keep safe from COVID-19?

This question was considered of high importance to assess the community's safety and preventative knowledge of COVID-19 in Duhok and Ninewa.

Most of the people 72% (n=3770, 80% from Duhok and 62% from Ninewa) knew how to keep safe from COVID-19. On the basis of gender, 74% (n=2067) of males (80% from Duhok and 70% from Ninewa) and 69% (n=1703) of females (81% from Duhok and 50% from Ninewa) had knowledge about the safety procedures such as social distancing, wearing masks and washing hands for 20 seconds.

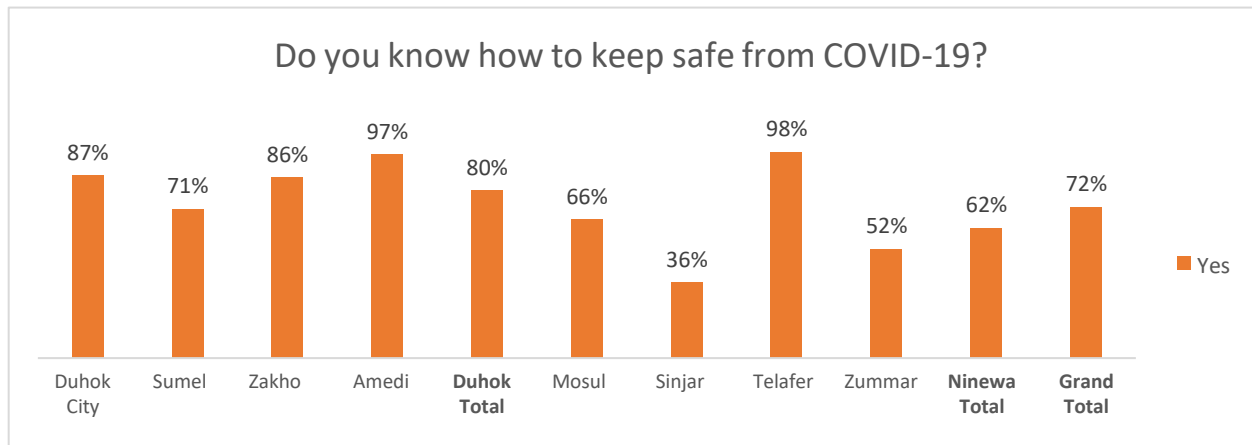


Chart 26: Do you know how to keep safe from COVID-19? - Locations

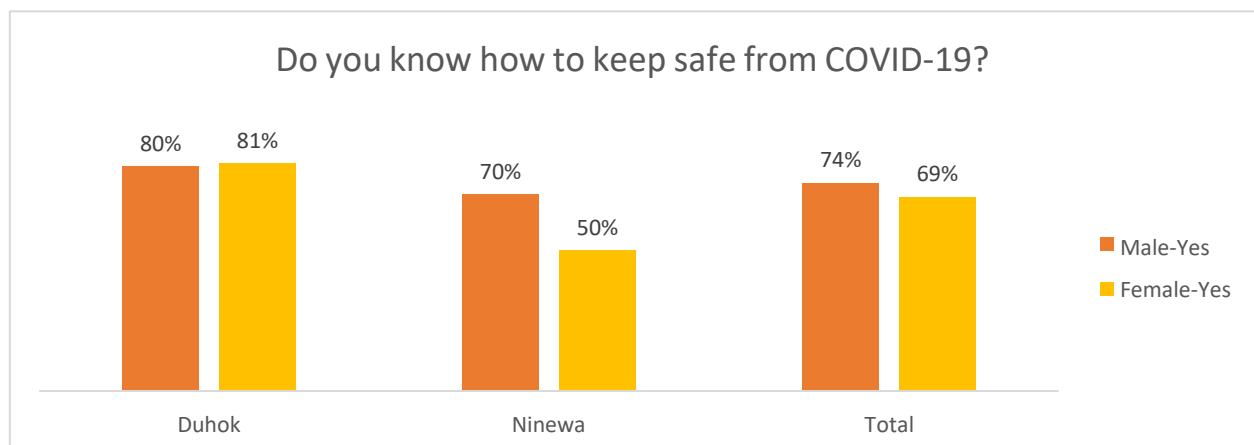


Chart 27: Do you know how to keep safe from COVID-19? – Gender by Governorate

Semi-literates had lesser knowledge about how to keep safe from COVID-19 compared with illiterates at 62% (n=1065) and 66% (n=1033) respectively.

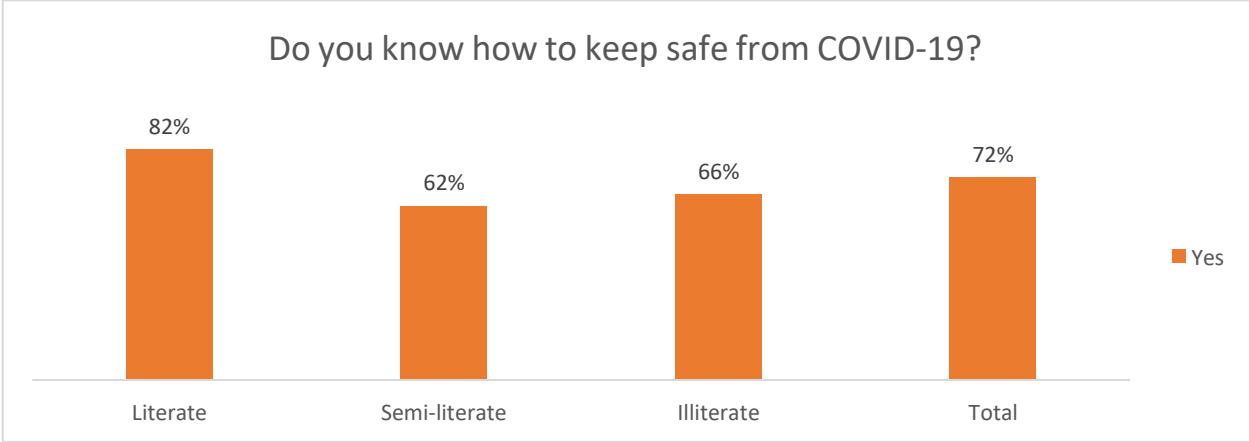


Chart 28: Do you know how to keep safe from COVID-19? – Literacy Level

Religious leaders, 61% (n=23), and daily wagers, 56% (n=472), had less knowledge than people from other occupations.

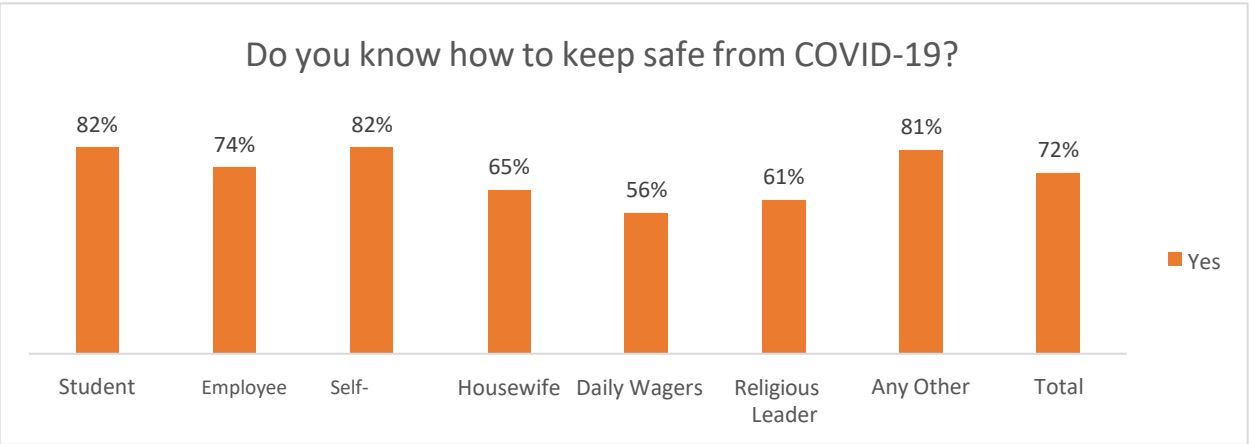


Chart 29: Do you know how to keep safe from COVID-19? - Occupation

People from higher age groups had less knowledge about safety procedures of COVID-19 compared to people from lower age groups.

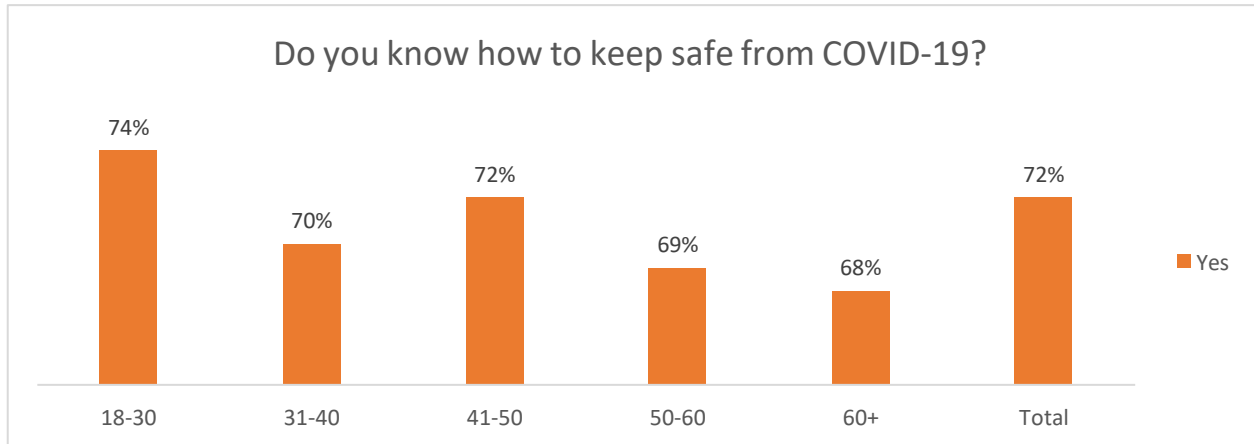


Chart 30: Do you know how to keep safe from COVID-19? – Age Group

Comparing the knowledge of different community groups based on their residential status, returnees, 64% (n=634), and IDPs, 69% (n=1097), had the least knowledge. In contrast, refugees, 88% (n=518), and host communities living in urban settings, 73% (n=928), had the highest knowledge about how to keep safe from virus. The comparison of other community groups is given in the chart below.

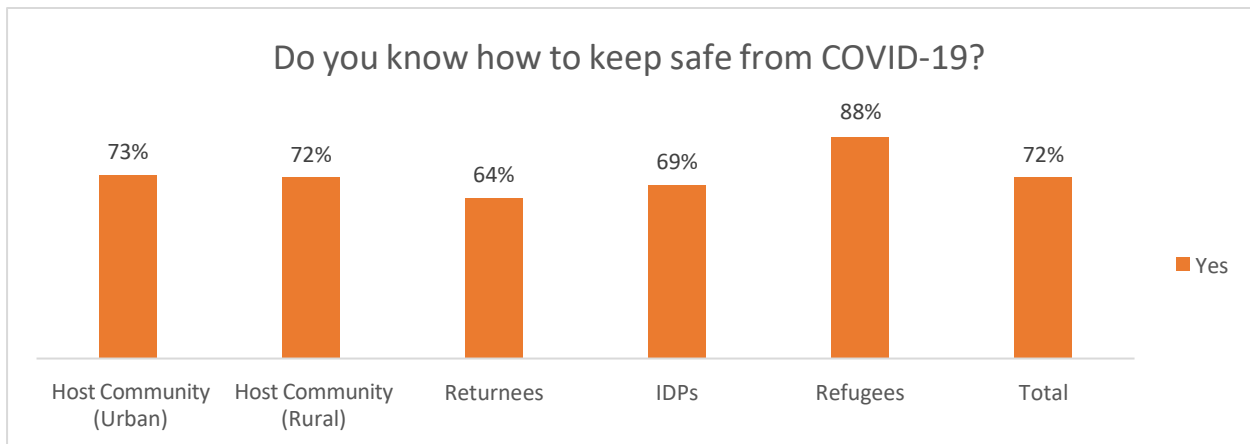


Chart 31: Do you know how to keep safe from COVID-19? – Community Segment

Knowledge around various vaccines, how and where to get vaccines, and ease of access to vaccination centers

The knowledge of the targeted communities about various types of vaccines was assessed in the following areas:

- Availability of types of vaccines, how to get registered and where to go for vaccines.
- Number of shots and after how many days second shot should be taken.
- Distance of vaccination center from places of residence.

Availability of types of COVID-19 vaccine

Regarding the knowledge about the types of vaccine available it was seen that respondents from Duhok, 27% (n=2056), and Ninewa, 28% (n=1714) were the best informed whilst those from Sumel (Duhok) and Zummar (Ninewa) had the least knowledge at 19% (n=903) and 13% (n=326) respectively.

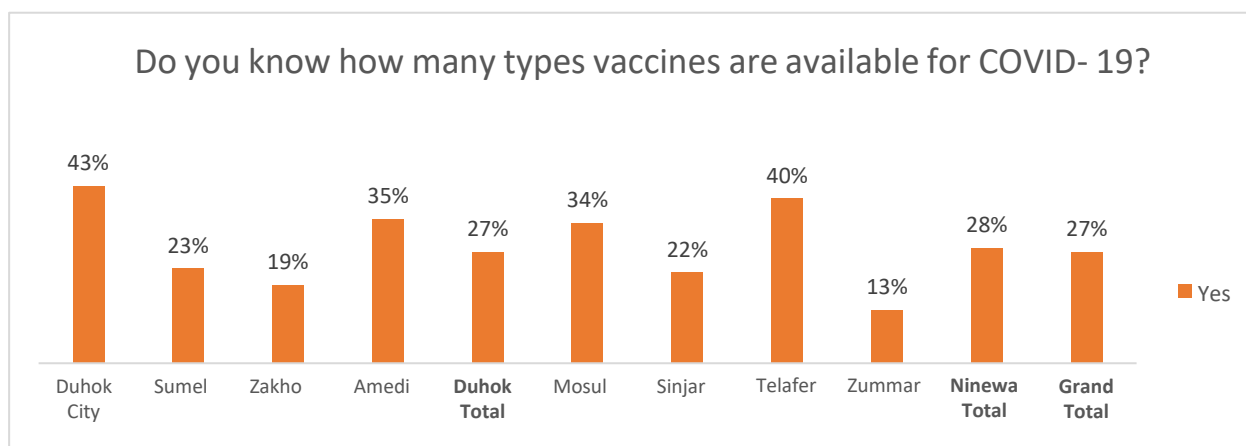


Chart 32: Do you know how many types vaccines are available for COVID-19? - Locations

When segregated by gender it was shown that that 30% (n=2067) of males (28% from Duhok and 33% from Ninewa) and 24% (n=1703) of females (26% from Duhok and 20% from Ninewa) knew how many vaccines were available.

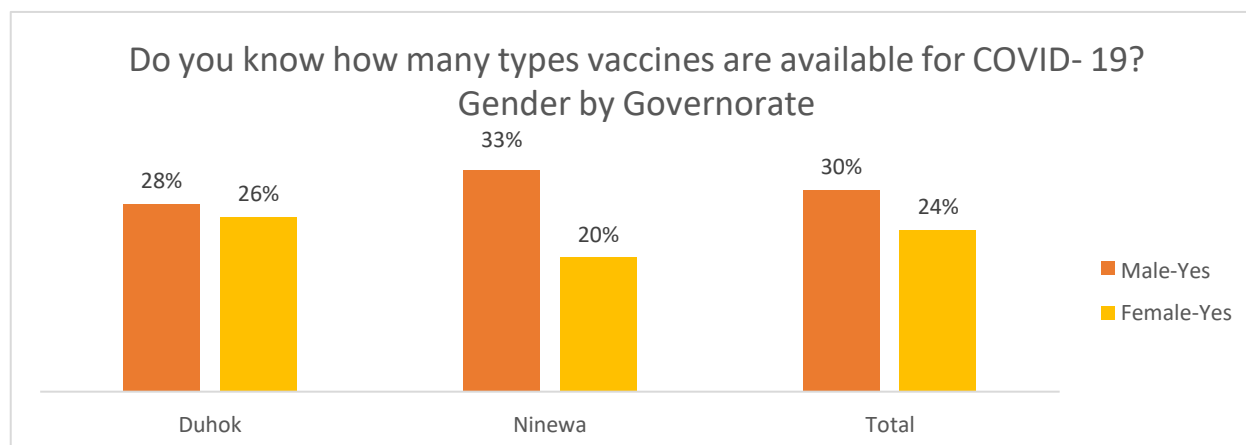


Chart 34: Do you know how many types vaccines are available for COVID-19? – Literacy Level

The level of knowledge drops with the decrease in the level of literacy. This is illustrated by the fact that 40% (n=1659) of the literate, 18% (n=1065) of the semi-literate and 16% (n=1033) of illiterate respondents respectively possessed knowledge about the types of vaccines available as shown below.

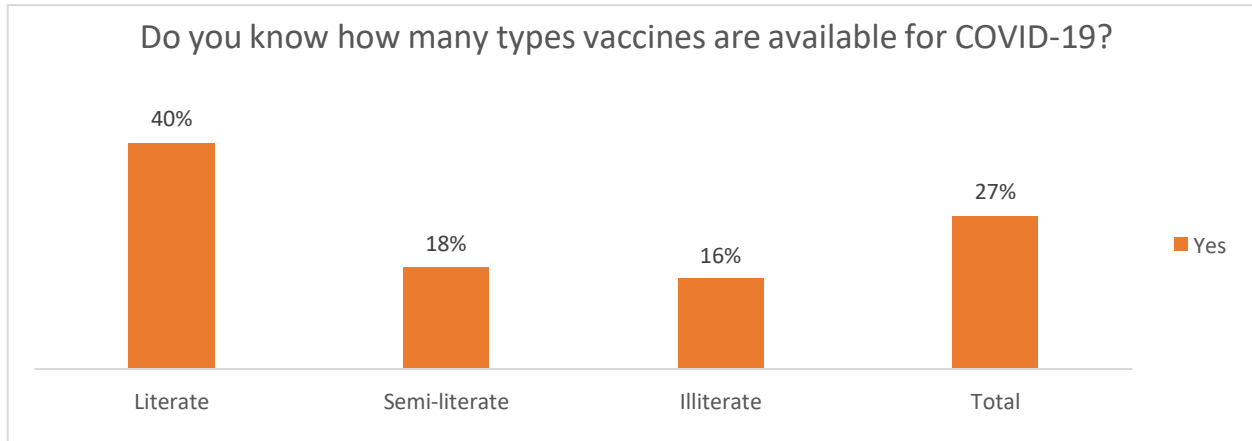


Chart 33: Do you know how many types vaccines are available for COVID-19? - Governorate

Regarding occupational backgrounds, housewives had the least knowledge of the types of vaccines available at 17% (n=1185), followed by the religious leaders which are at 22% (n=23).

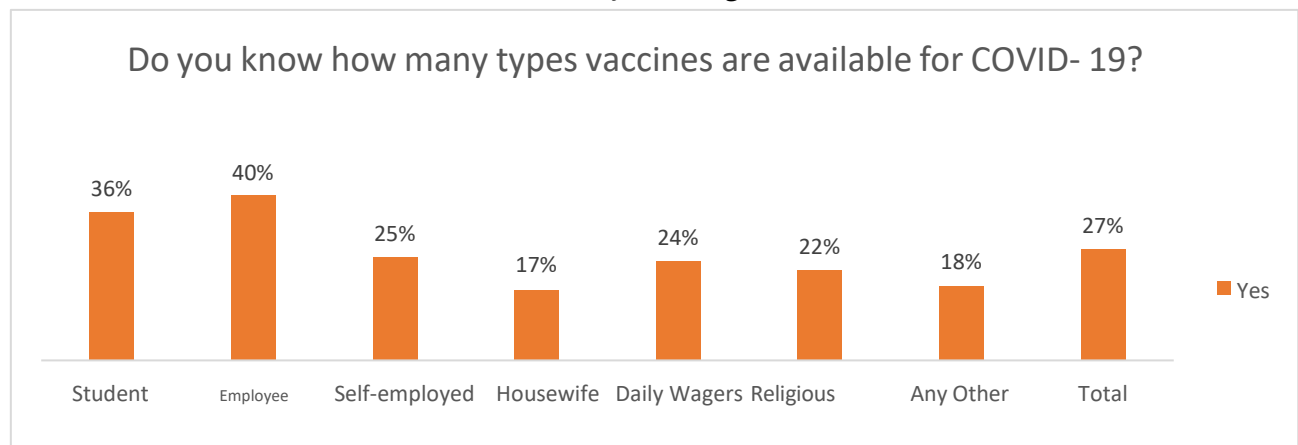


Chart 35: Do you know how many types vaccines are available for COVID-19? - Occupation

Finally, people from higher age groups had less knowledge when compared to those from the lower age groups. The comparison of knowledge, about availability of vaccine, of the respondents from various age groups is given in the chart below.

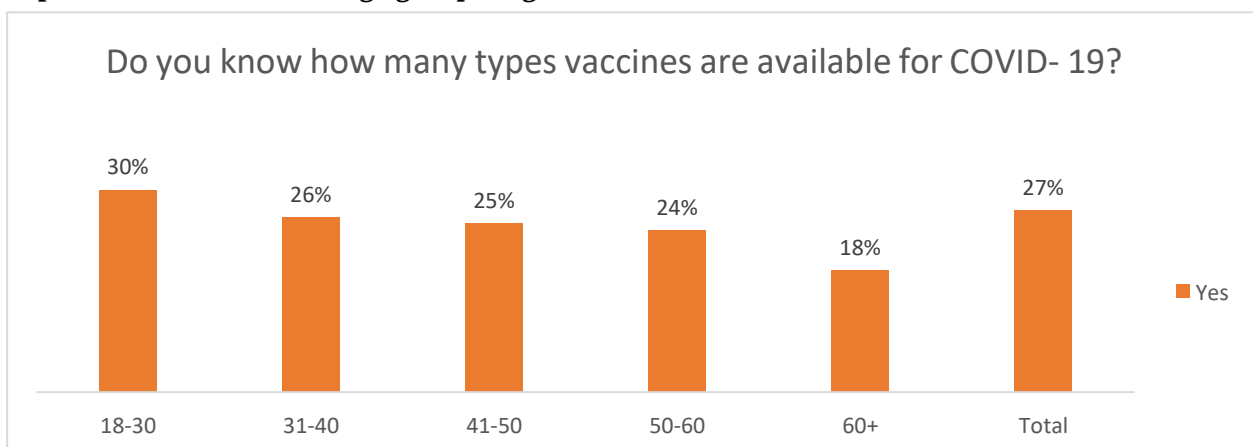


Chart 36: Do you know how many types vaccines are available for COVID-19? – Age Group

IDPs, 17% (n=1097), had less knowledge when compared to other community groups. The comparison of knowledge, about availability of vaccine, of the respondents from various community groups is given in the chart below.

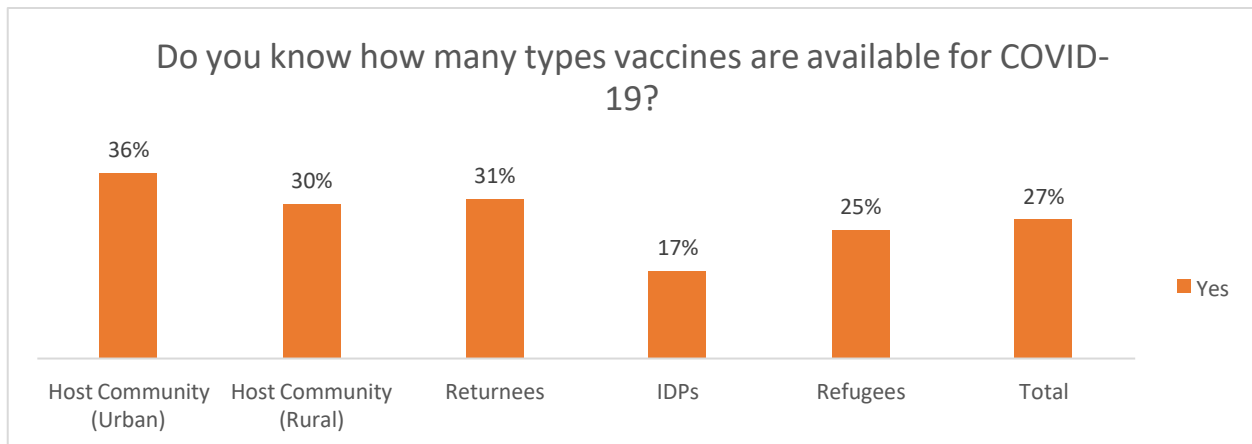


Chart 37: Do you know how many types vaccines are available for COVID-19? – Community Segment

How to register for vaccination?

42% (n=3770) of the respondents (40% from Duhok and 46% from Ninewa) knew how to register for the COVID-19 vaccine.

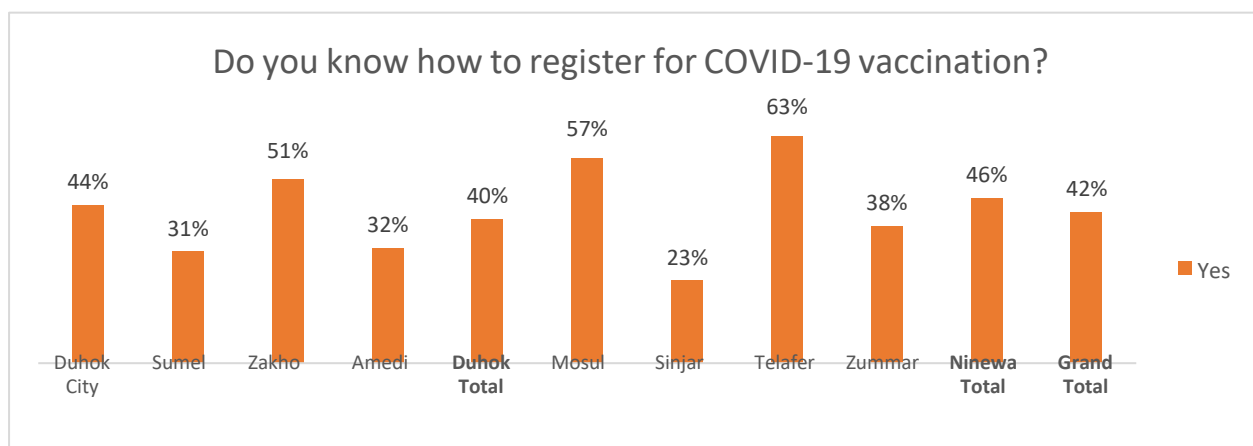


Chart 38: Do you know how to register for COVID-19 vaccination? - Locations

Gender segregation, presented in the chart below, shows that 50% (n=2067) of males (46% from Duhok and 54% from Ninewa) and 33% (n=1703) of females (33% from Duhok and 32% from Ninewa) knew how to register for the COVID-19 vaccine.

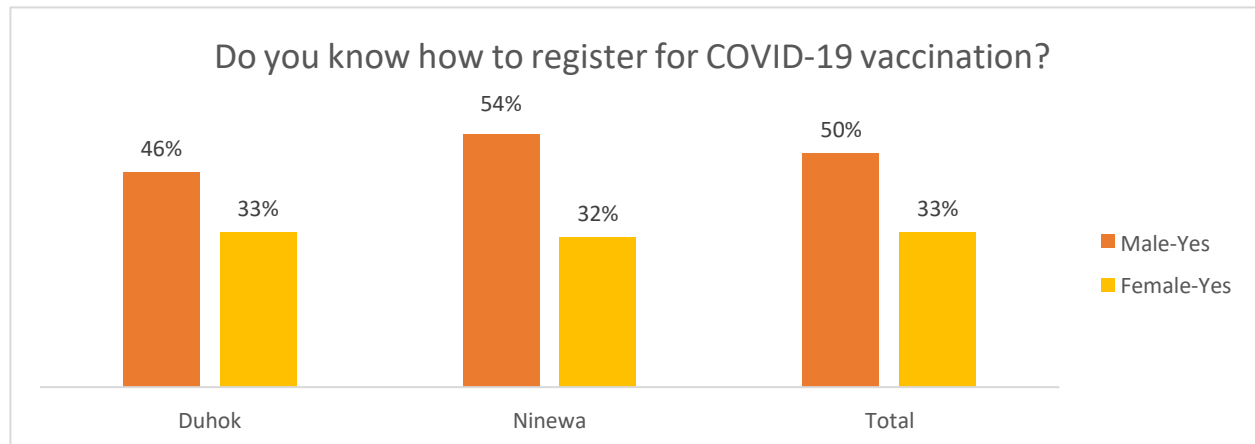


Chart 39: Do you know how to register for COVID-19 vaccination? – Gender by Governorate

With respect to education level, semi-literates had less knowledge about how to register for the COVID-19 vaccine compared with illiterates at 29% (n=1065) and 30% (n=1033) respectively.

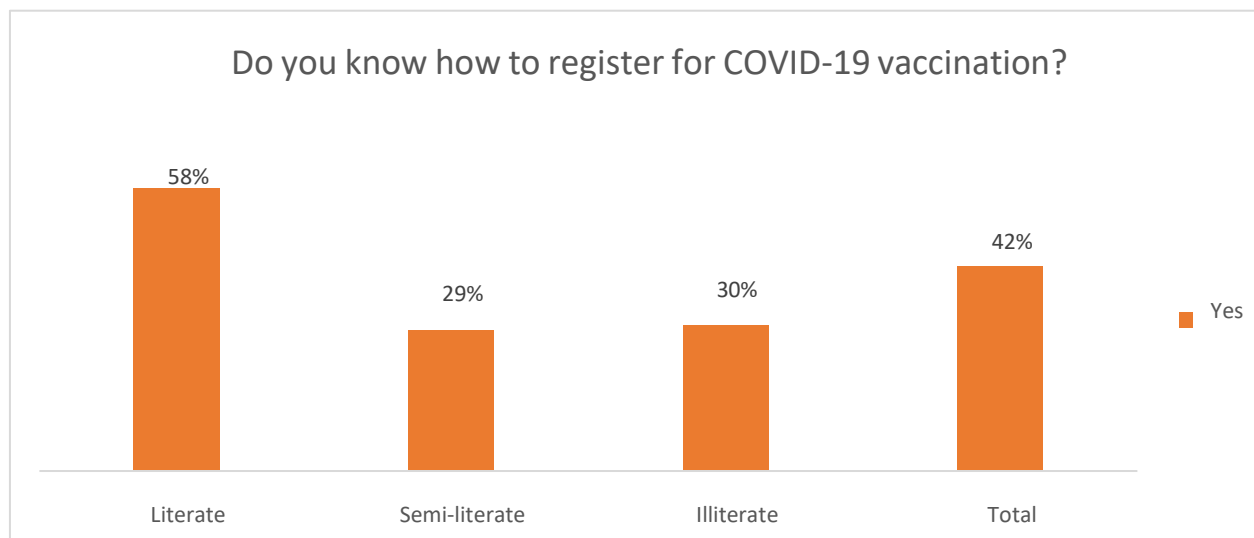


Chart 40: Do you know how to register for COVID-19 vaccination? – Literacy Level

Religious leaders, 22% (n=23), and housewives, 26% (n=1185) showed less knowledge of how to register for vaccinations than did those of other occupations which showed an average of 42% (n=3939).

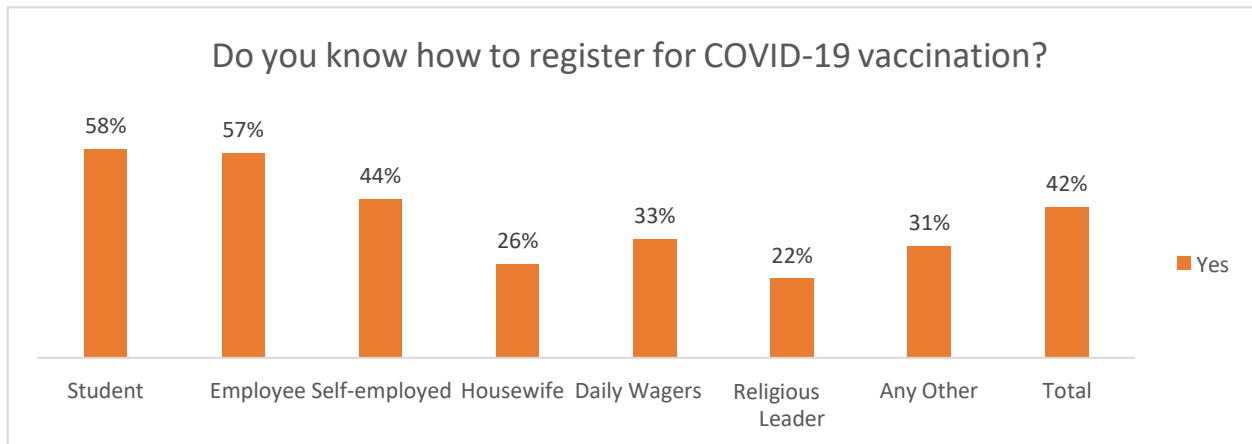


Chart 41: Do you know how to register for COVID-19 vaccination? - Occupation

People from the higher age groups had less knowledge compared to respondents from lower age groups. The comparison of knowledge of the survey respondents of various age groups is given in the chart below.

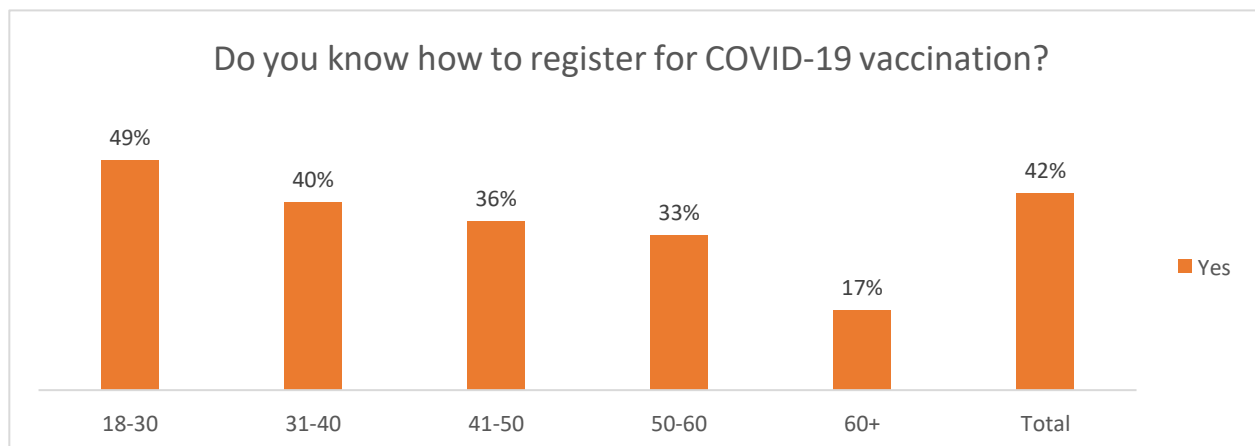


Chart 42: Do you know how to register for COVID-19 vaccination? – Age Group

27% (n=518) of refugees knew the procedure for registration for vaccine followed by IDPs, 35% (n=1097). The percentage of knowledge of different community groups is given in the chart below.

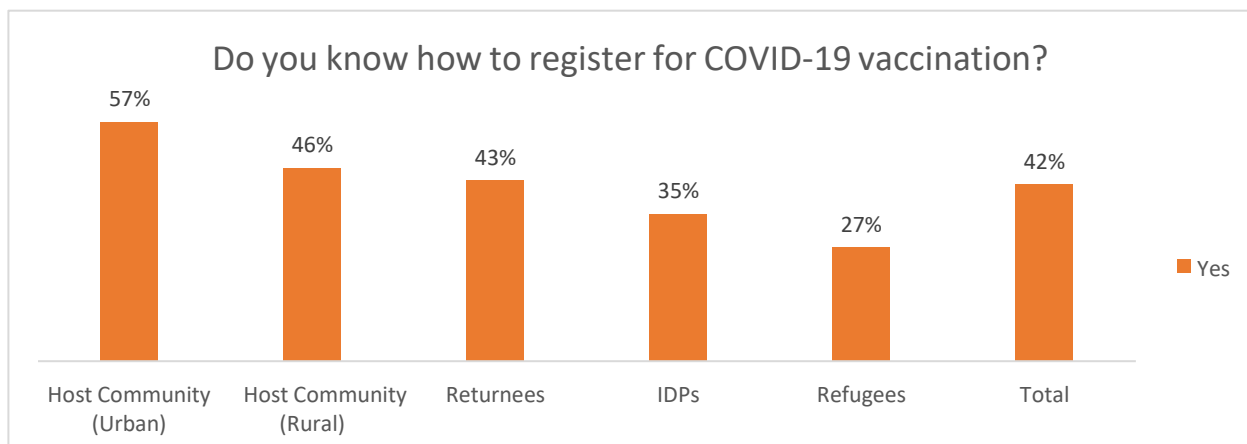


Chart 43: Do you know how to register for COVID-19 vaccination? – Community Segment

Where to go for a vaccination?

The majority of respondents 59% (n=3770), 54% from Duhok and 64% from Ninewa, knew where to go to be vaccinated. Alternatively, the respondents from Sumel (Duhok) 45% (n=903) and Sinjar (Ninewa) 33% (n=432) had the least knowledge about vaccination centers.

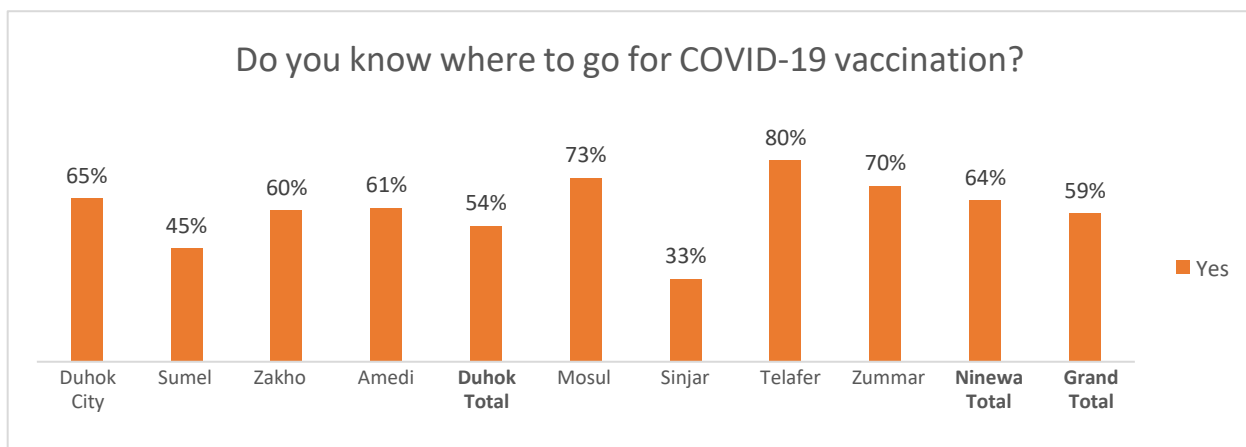


Chart 44: Do you know where to go for COVID-19 vaccination? - Locations

64% (n=2067) of males (60% from Duhok and 68% from Ninewa) and 52% (n=1703) of females (49% from Duhok and 46% from Ninewa) knew where the vaccine centers were located.

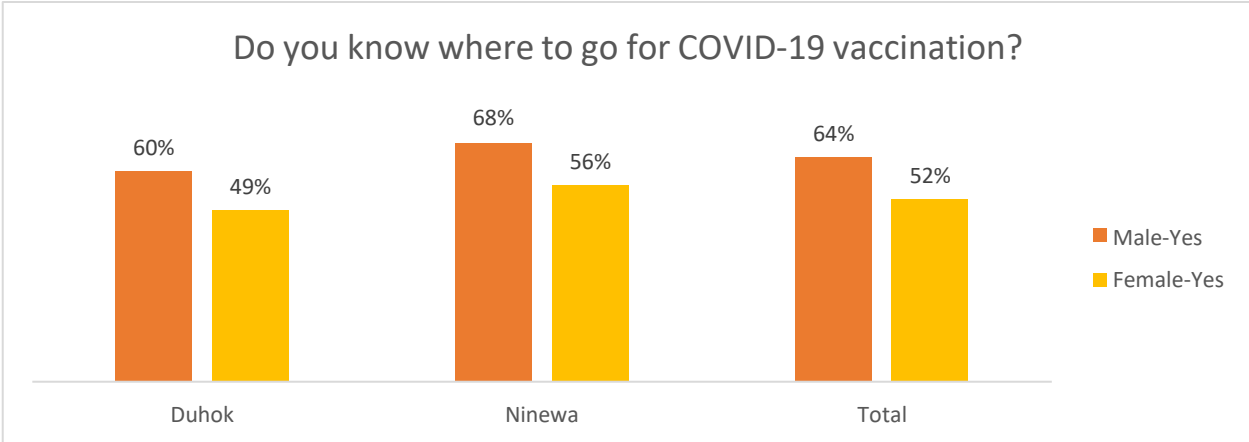


Chart 45: Do you know where to go for COVID-19 vaccination? – Gender by Governorate

As shown in the chart below, semi-literates had less knowledge concerning the whereabouts of the vaccine centers than illiterates at 45% (n=1065) and 50% (n=1033) respectively.

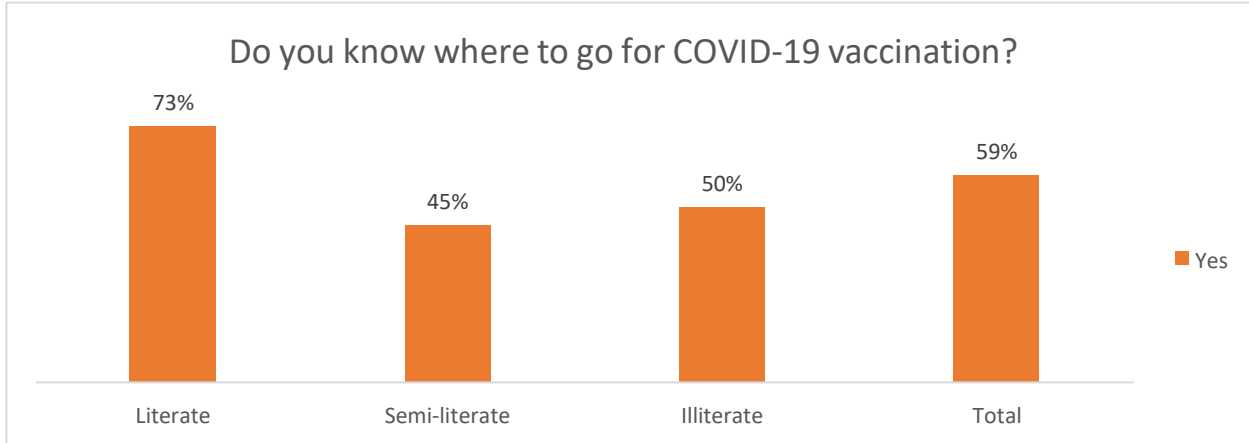


Chart 46: Do you know where to go for COVID-19 vaccination? – Literacy Level

As shown in the chart below, religious leaders at 39% (n=23) and daily wagers at 46% (n=472) had the least knowledge when compared with people from other occupations who averaged 59%.

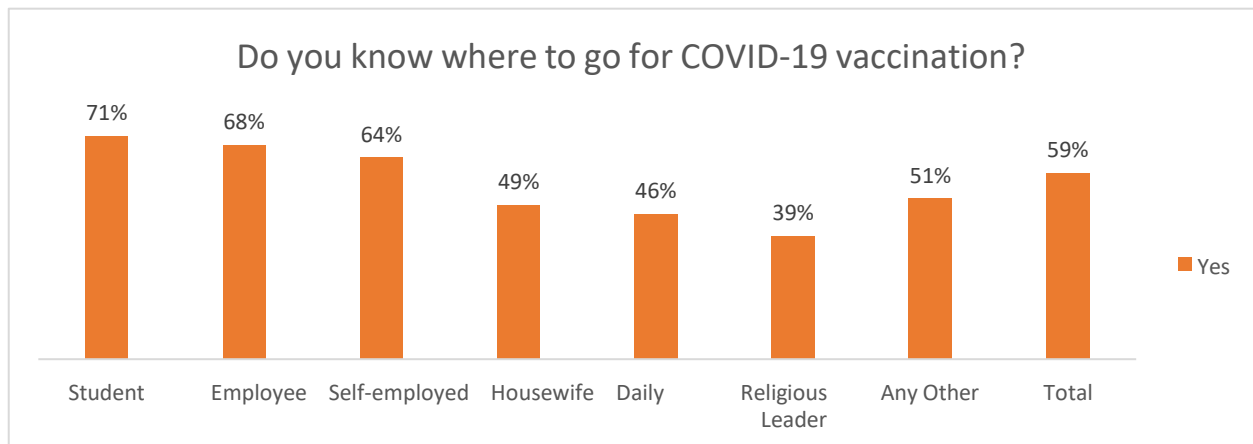


Chart 47: Do you know where to go for COVID-19 vaccination? - Occupation

People from higher age groups had less knowledge compared to respondents from lower age groups. This is shown in the chart below.

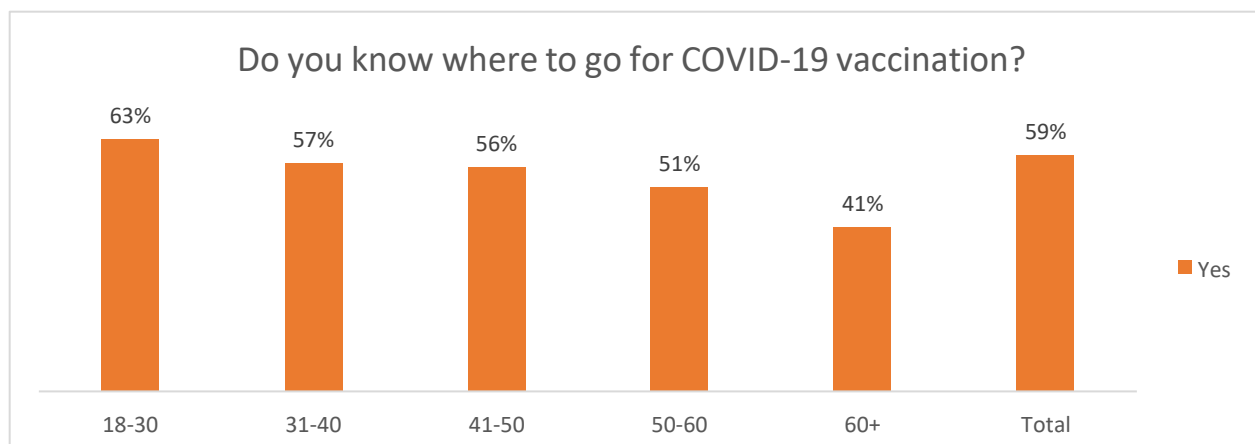


Chart 48: Do you know where to go for COVID-19 vaccination? – Age Group

As shown in the chart below, refugees at 46% (n=518) and IDPs at 49% (n=1097) had the least knowledge when compared with people from other occupations who averaged 59%.

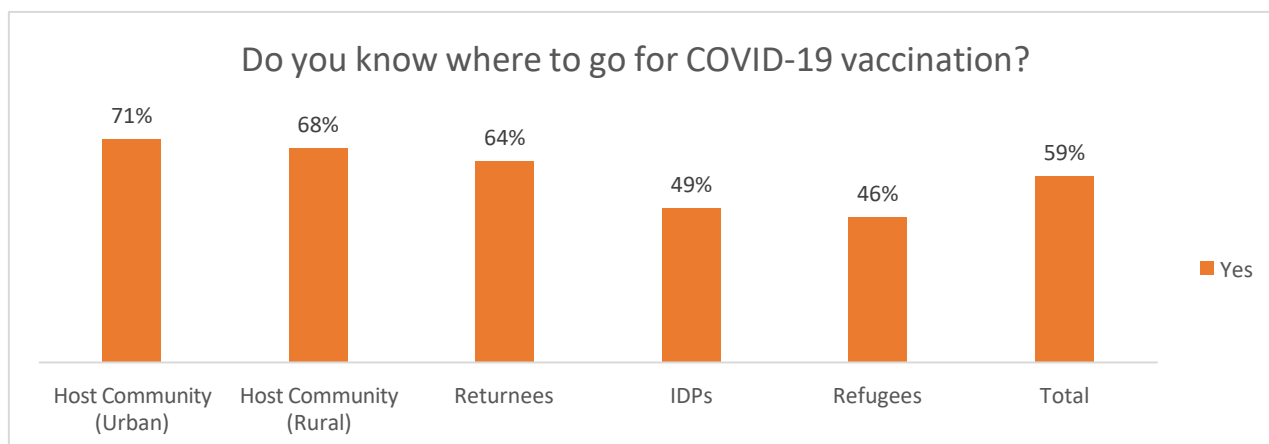


Chart 49: Do you know where to go for COVID-19 vaccination? – Community Segment

How many times one needs to be vaccinated (number of shots) for COVID-19?

43% (n=3770) of respondents (36% from Duhok and 51% from Ninewa) knew how many times one needed to be vaccinated, however in most of the cases, the time needed to wait to take the second shot was stated wrong. The comparison among the locations of Duhok and Ninewa can be seen.

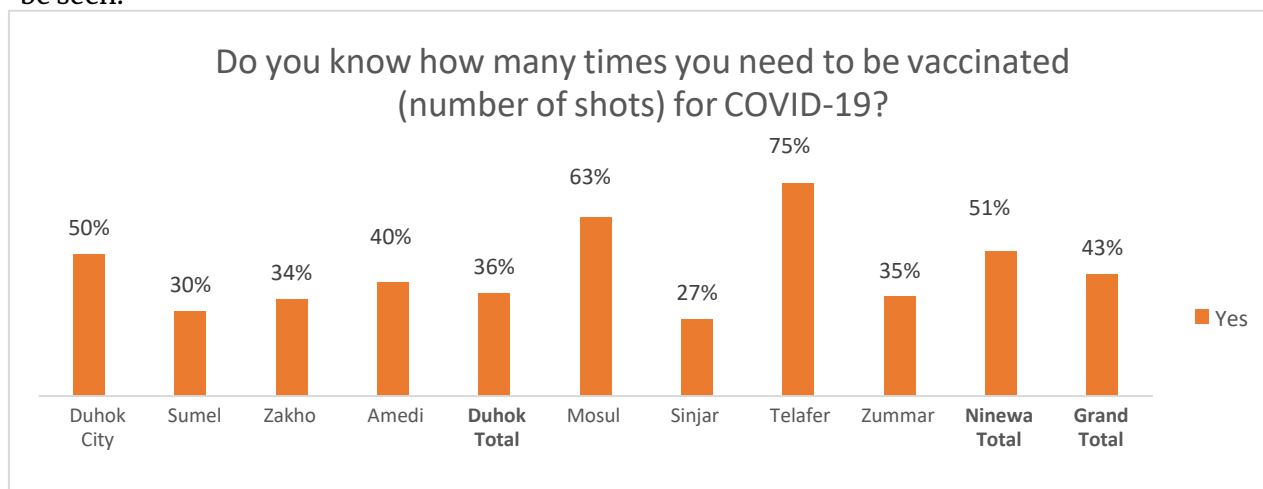


Chart 50: Do you know how many times you need to be vaccinated (Number of shots) for COVID-19? - Locations

In addition, gender segregation shows that 47% (n=2067) of males (40% from Duhok and 54% from Ninewa) and 38% (n=1703) of females (33% from Duhok and 45% from Ninewa) knew the number of times one needed to be vaccinated. The comparison of Duhok and Ninewa with gender segregation is shown in the chart below.

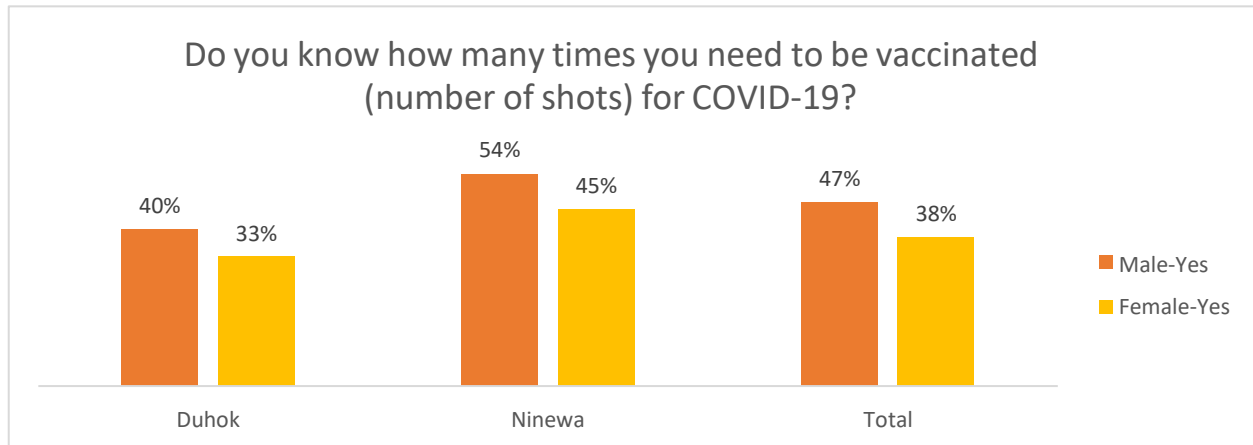


Chart 51: Do you know how many times you need to be vaccinated (Number of shots) for COVID-19? – Gender by Governorate

As shown in the chart below, semi-literates had less knowledge about the number of shots of COVID-19 vaccine than did illiterates at 29% (n=1065) and 34% (n=1033) respectively.

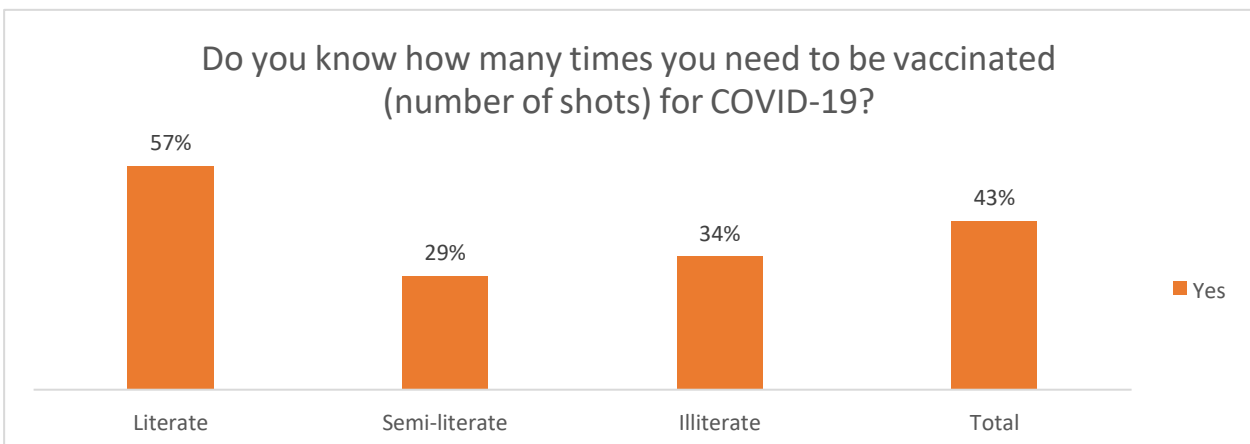


Chart 52: Do you know how many times you need to be vaccinated (Number of shots) for COVID-19? – Literacy Level

The comparison, shown in the chart below, revealed that religious leaders at 22% (n=23) and housewives at 33% (n=2285) had the least knowledge when compared with people from other occupations who averaged 43%.

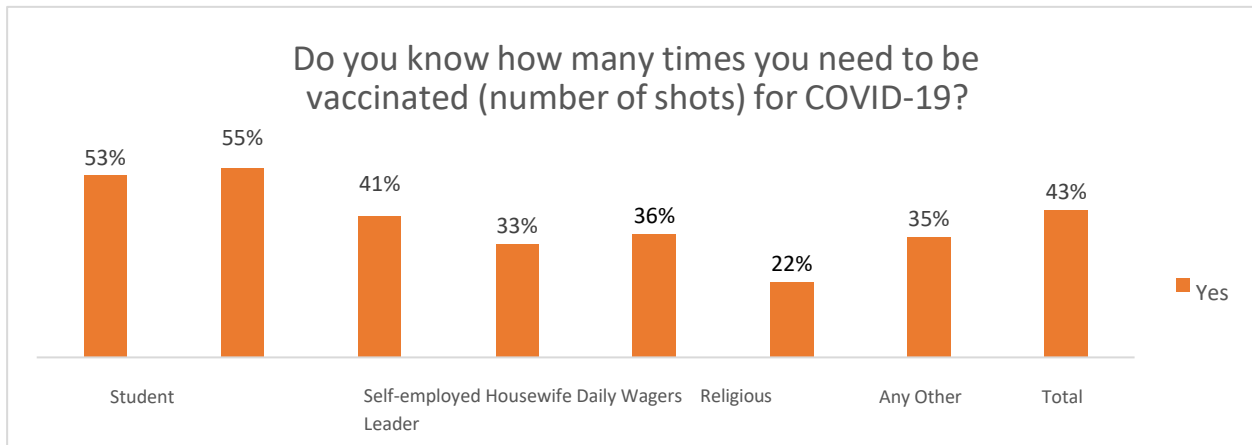


Chart 53: Do you know how many times you need to be vaccinated (Number of shots) for COVID-19? - Occupation

People from higher age groups had less knowledge compared to respondents from lower age groups. The comparison of knowledge of the survey respondents of various age groups.

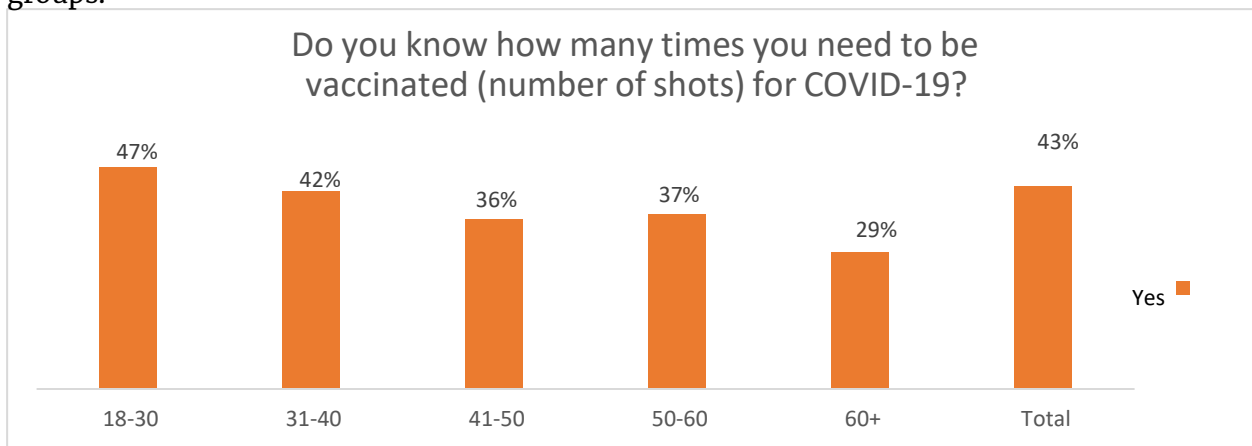


Chart 54: Do you know how many times you need to be vaccinated (Number of shots) for COVID-19? – Age Group

IDPs at 29% (n=1097) and refugees at 35% (n=518) had the least knowledge when compared with people from other community groups who averaged 43%.

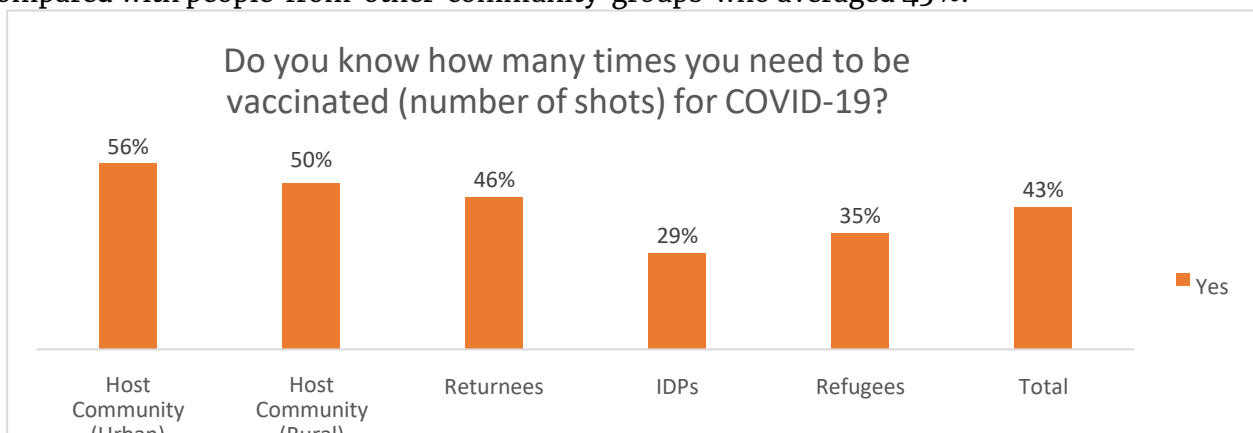


Chart 55: Do you know how many times you need to be vaccinated (Number of shots) for COVID-19? – Community Segment

Distance of vaccination center from places of residence

For the majority of people surveyed, 52% (n=3770), the vaccination center was less than 30 minutes from their home as stated by 5% (n=2056) of the respondents from Duhok and 46% (n=1714) of those from Ninewa. In 32% (n=3770) of the cases, the center was more than 30 minutes and less than an hour away, and in 16% (n=3770) of the cases it was over an hour from the places of residence.

Sinjar had the most distant vaccination centers with 44% (n=432) of respondents stating that they had to travel over an hour from their residences. The charts below show the percentages for comparison.

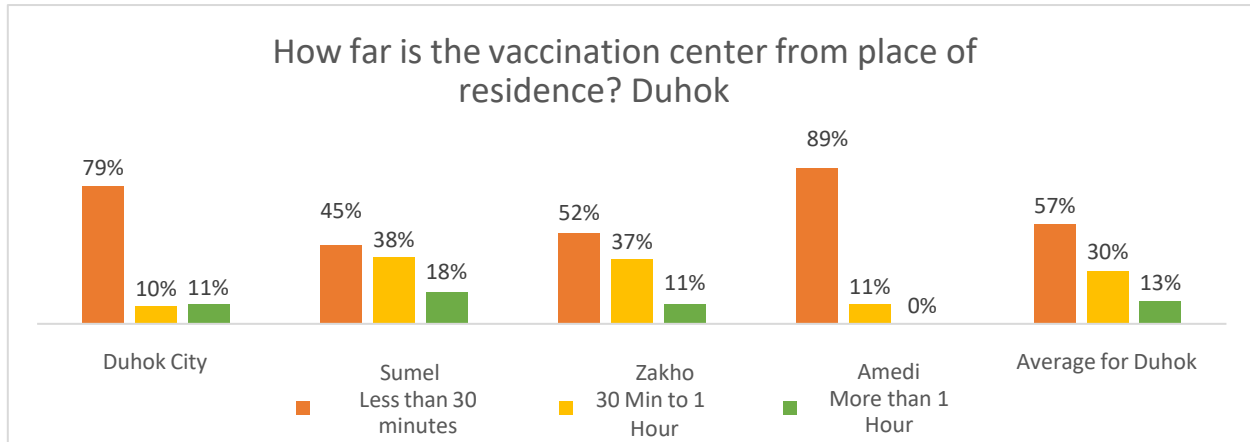


Chart 56: How far is the vaccination center from your home? – Duhok Locations

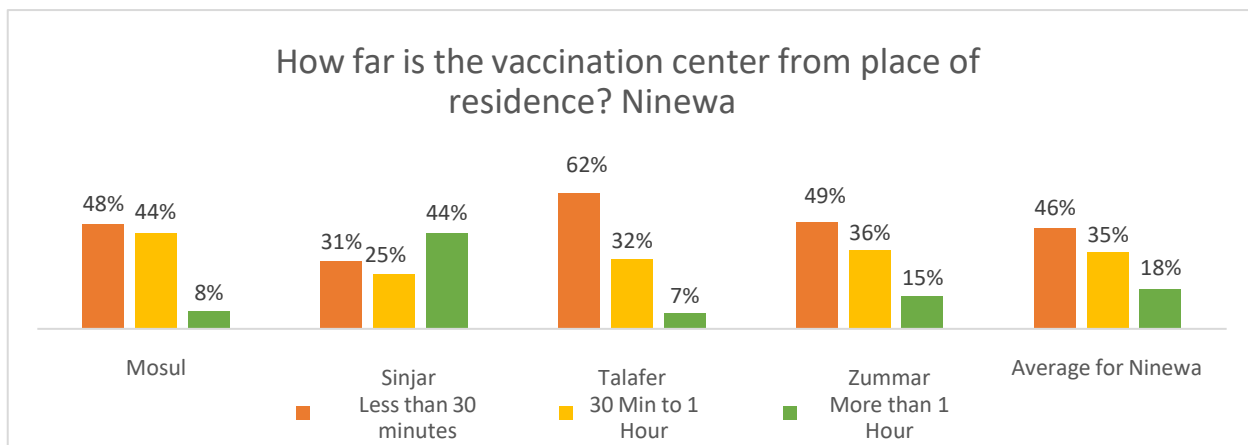


Chart 57: How far is the vaccination center from your home? – Ninewa Locations

Sources of Information

The major source of information for the community about COVID-19 was social media (Facebook, Instagram, WhatsApp) which was confirmed by 53% (n=3770) of respondents (57% in Duhok and 49% in Ninewa). Television was the second biggest source of information as stated by 24% (n=3770) of those surveyed (22% in Duhok and 26% in Ninewa).

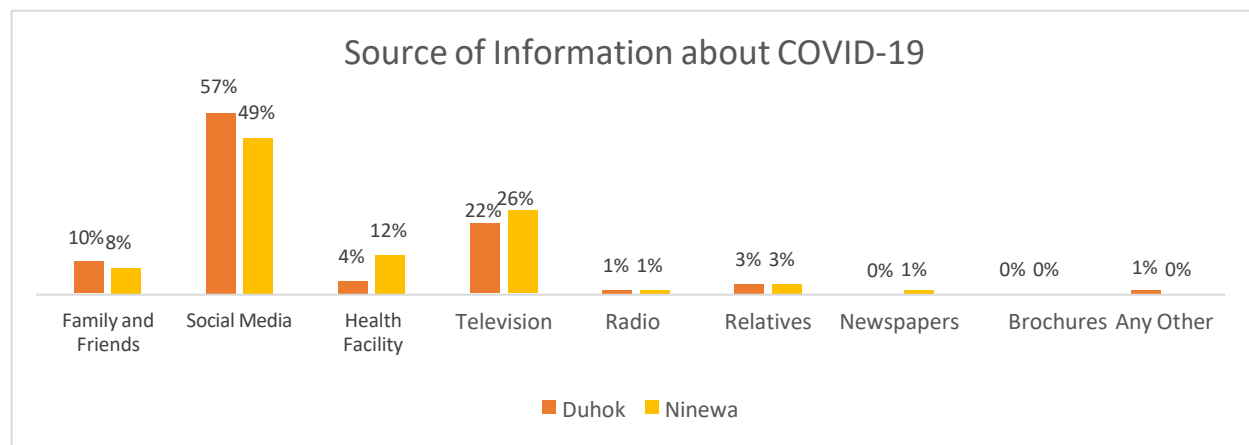


Chart 58: Source of Information about COVID-19 – Both Governorates

The gender segregation of analysis shows that social media is being used by 62% (n=991) male and 53% (n=1065) female in Duhok and 57% (n=1076) male and 34% (n=638) female in Ninewa. Similarly, TV is the second biggest source of information for 19% (n=991) male and 26% (n=1065) female in Dohuk and 21% (n=1076) male and 33% (n=638) female in Ninewa.

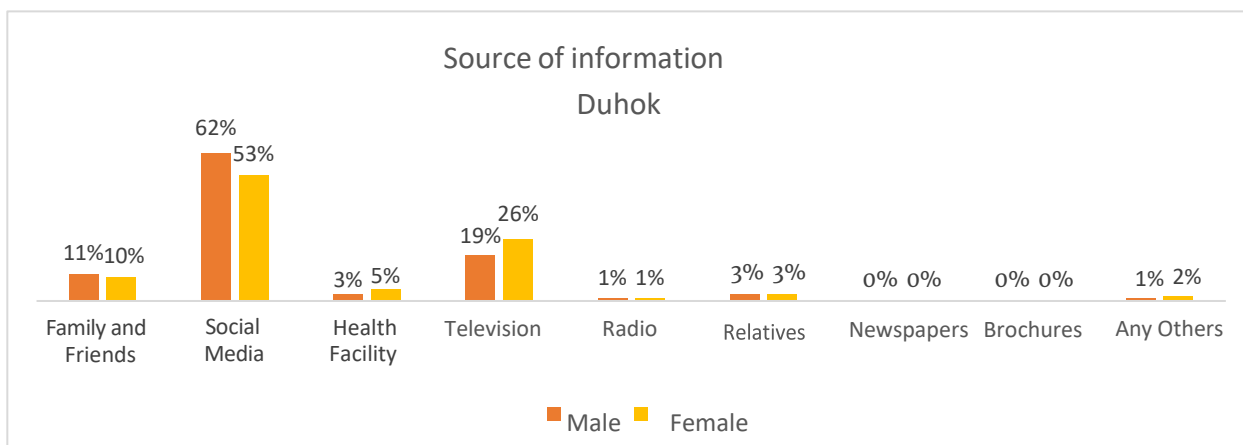


Chart 59: Source of information – Duhok

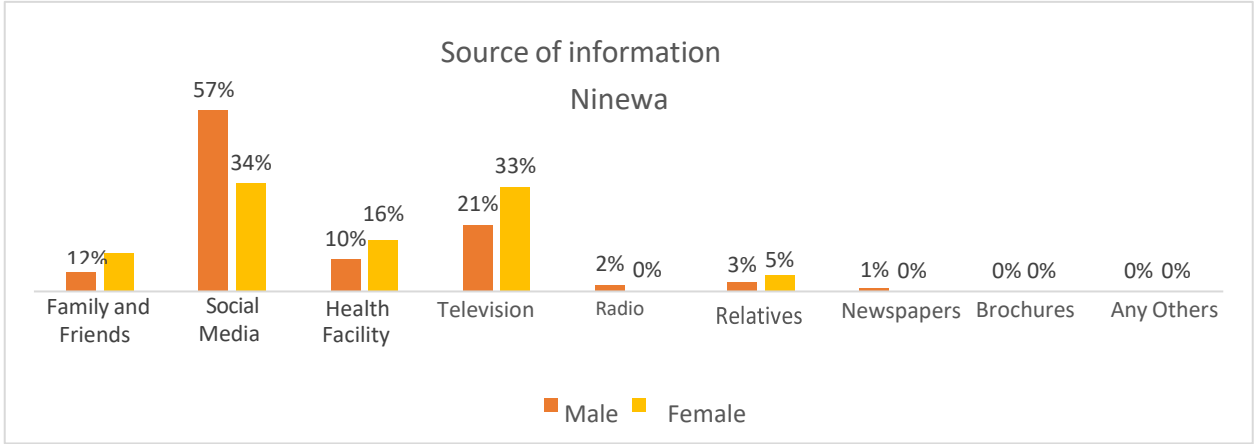


Chart 60: Source of information - Ninewa

Whether respondents have the means, access to internet and/or smartphones, to access and are familiar with vaccine registration protocols

Most of the respondents, 70% (n=3770), had access to the internet and had a smartphone (or other device) for registering their names for vaccination. 63% (n=1097) of IDPs, 75% (n=518) of refugees, 69% (n=634) of returnees had access to the internet. IDPs were found to have the lowest access levels. The comparison of community groups with access to internet is given in the chart below.

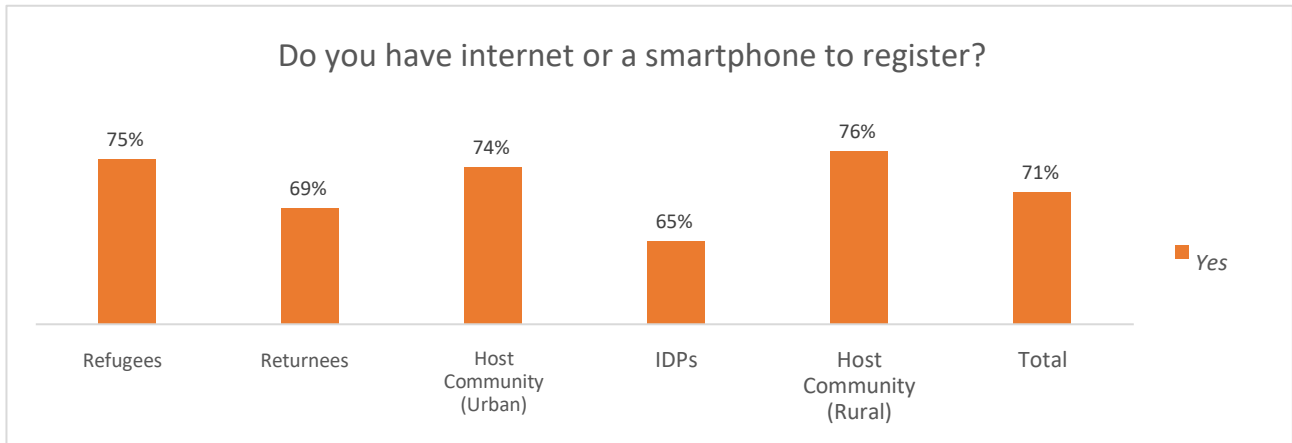


Chart 61: Do you have the internet or smartphone to register for a vaccination? – Community Segment

With respect to gender, women had less access to the internet or smartphones, 53% (n=1703) than did men, 76% (n=2067).

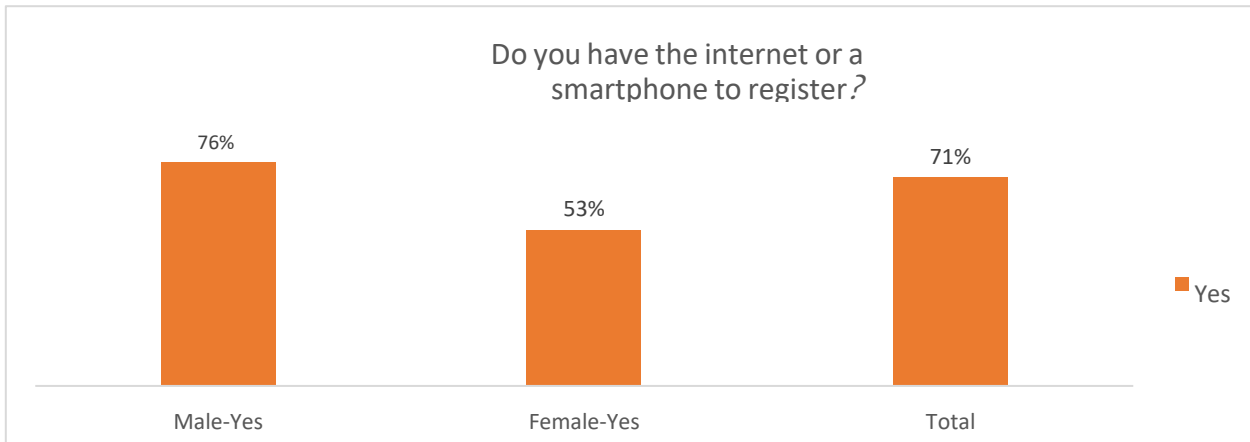


Chart 62: Do you have the internet or smartphone to get register for vaccination? Gender

Regarding access by location, Sumel in Duhok, Governorate 70% (n=903), and Sinjar district in Ninewa, 51% (n=432), had the lowest access to internet or smartphones. Access to the internet in each location is shown in the charts below.

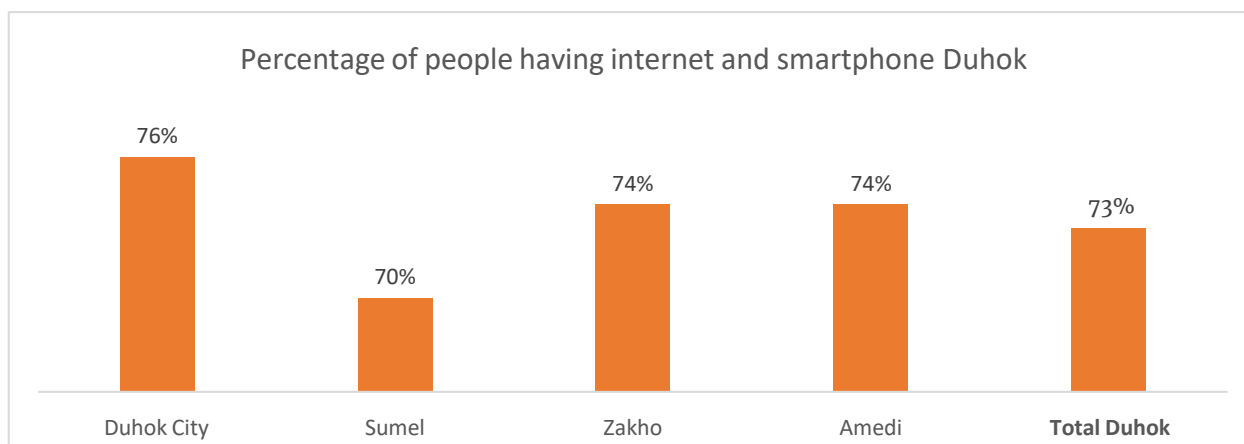


Chart 63: Percentage of People having internet and smartphone – Duhok Locations

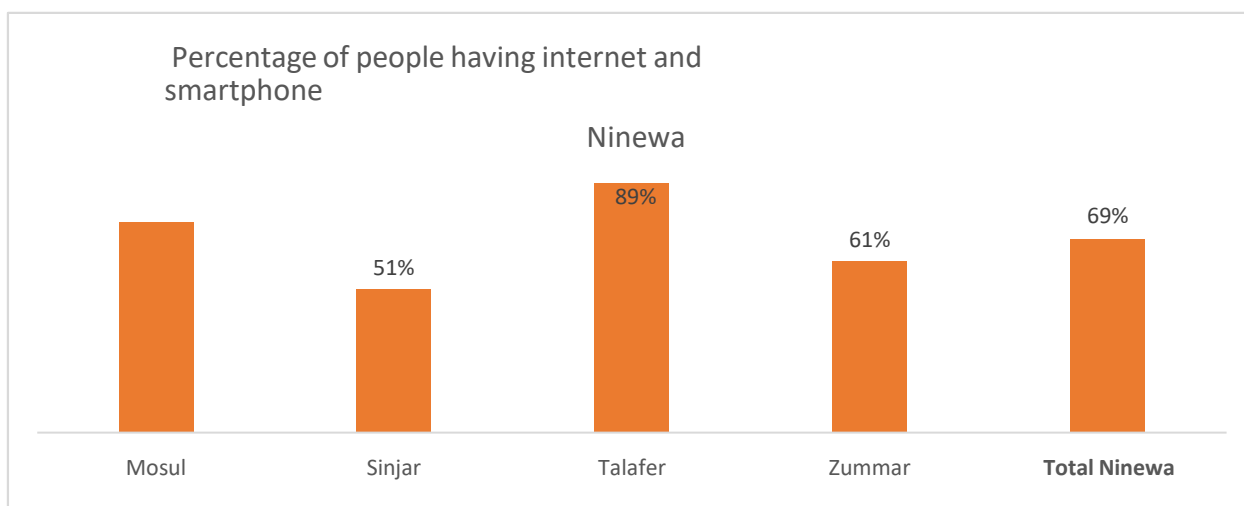


Chart 64: Percentage of People having internet and smartphone – Ninewa Locations

65% (n=1097) of IDPs and 69% (n=634) of returnees had internet access. The comparison of accessibility to internet and smart phones, of different community groups, is shown in the chart below.

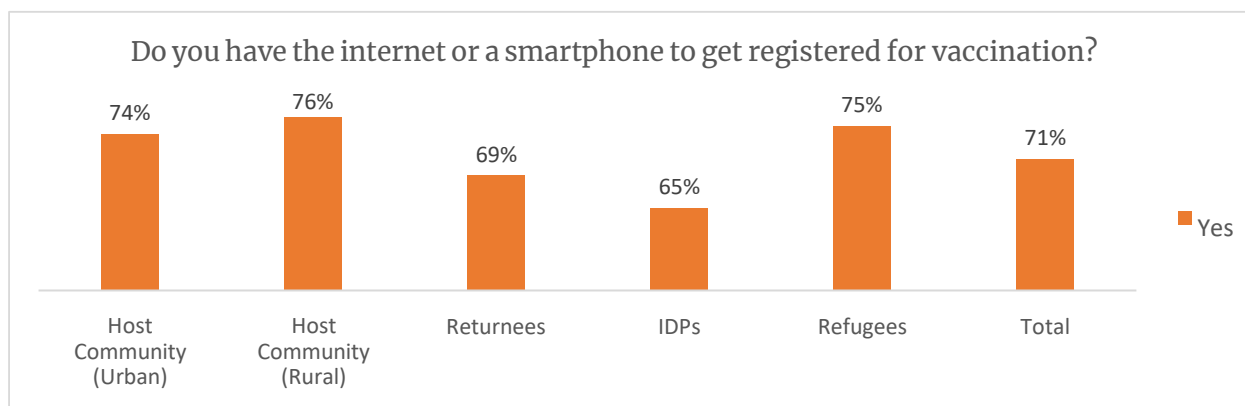


Chart 65: Do you have the internet or smartphone to get registered for vaccination? – Community Segment

Attitude

Perceptions/attitudes towards COVID-19 vaccines

How safe is a COVID-19 vaccination?

50% (n=3770) of the respondents were of the view that the vaccine is not safe. By location, 52% (n=2056) in Duhok and 47% (n=1714) in Ninewa were of the view that the COVID-19 vaccine was not safe for them. The comparison between target locations is given in the chart below.

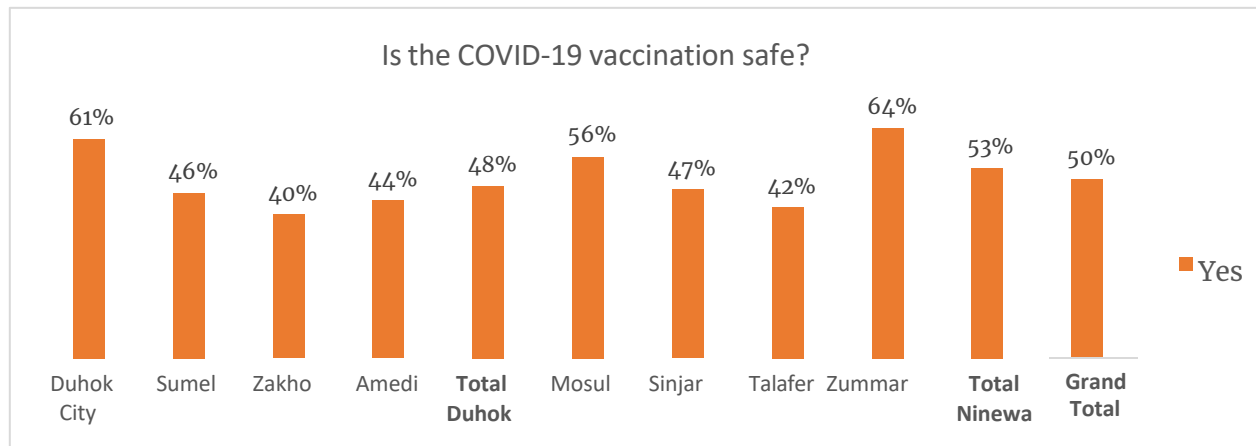


Chart 66: Is the COVID-19 vaccination safe? - Locations

Gender segregation of data shows that 50% (n=3770), (52% male and 48% female) of respondents thought that the vaccination was safe. Most of them were IDP's, 61% (n=1097) and returnees, 53% (n=634). The comparison of Duhok and Ninewa with gender segregation is given in the chart below.

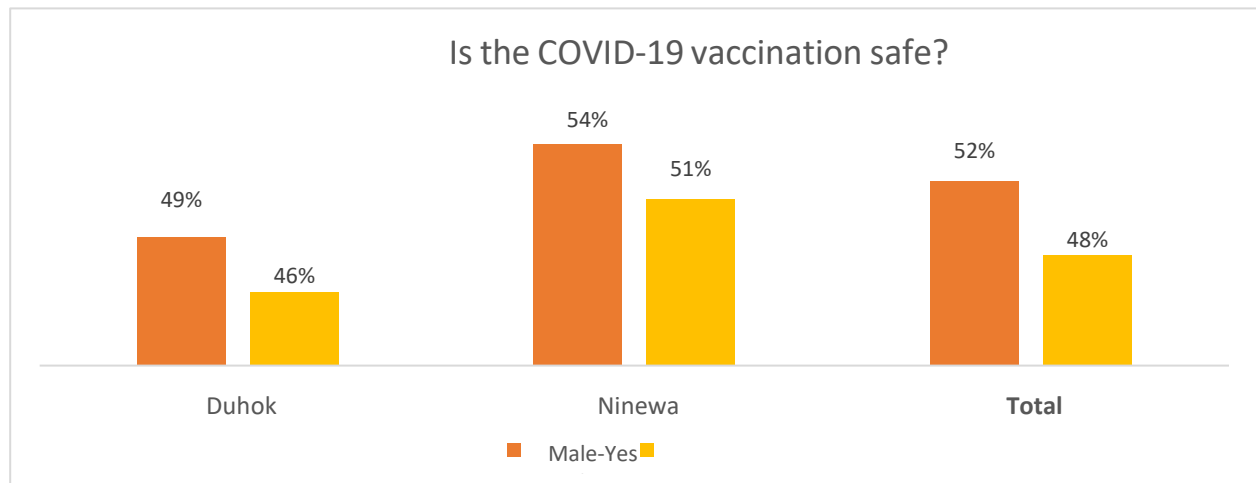


Chart 67: Is the COVID-19 vaccination safe? – Gender by Governorates

With respect to literacy level, as shown in the chart below, 44% (n=1065) of semi- literates thought that COVID-19 vaccination is safe compared to the illiterates 46% (n=1033) and literates, 56% (n=1659).

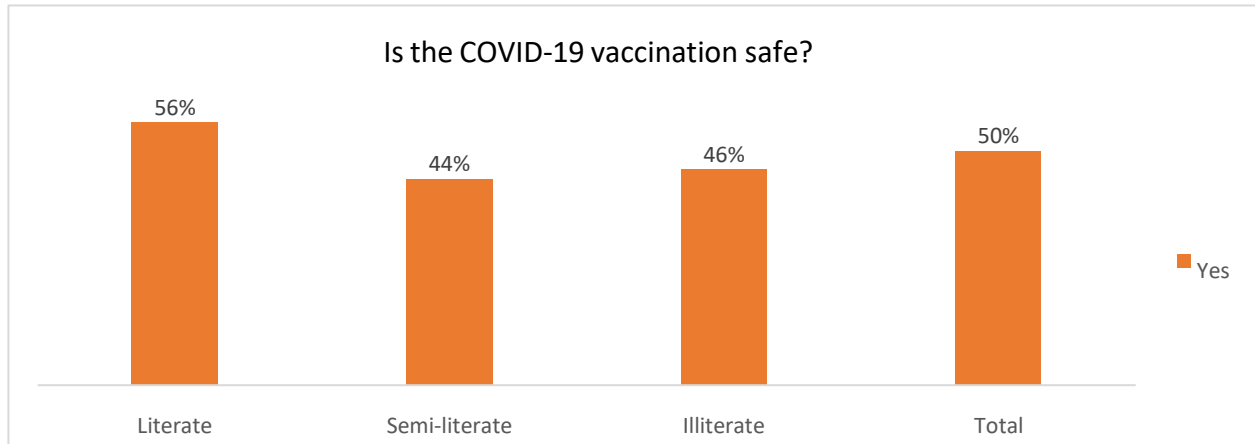


Chart 68: Is the COVID-19 vaccination safe? – Literacy Level

The perception about the safety of vaccination is lowest among housewives 46% (n=1185), followed by the daily wagers with 47% (n=472).

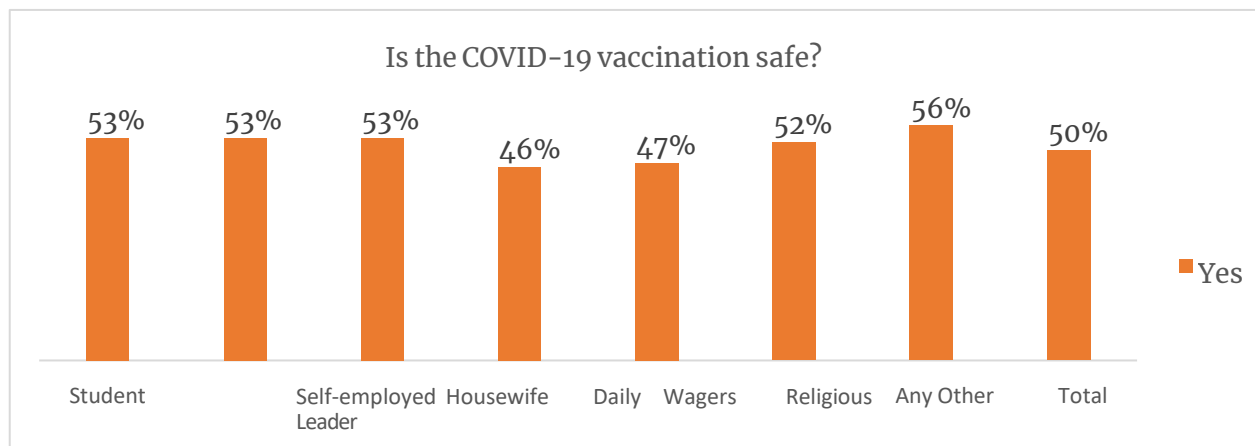


Chart 69: Is the COVID-19 vaccination safe? – Occupation

The analysis of responses by age group shows that most of the people from lower age group thought that the vaccination is safe compared with the people from higher age groups.

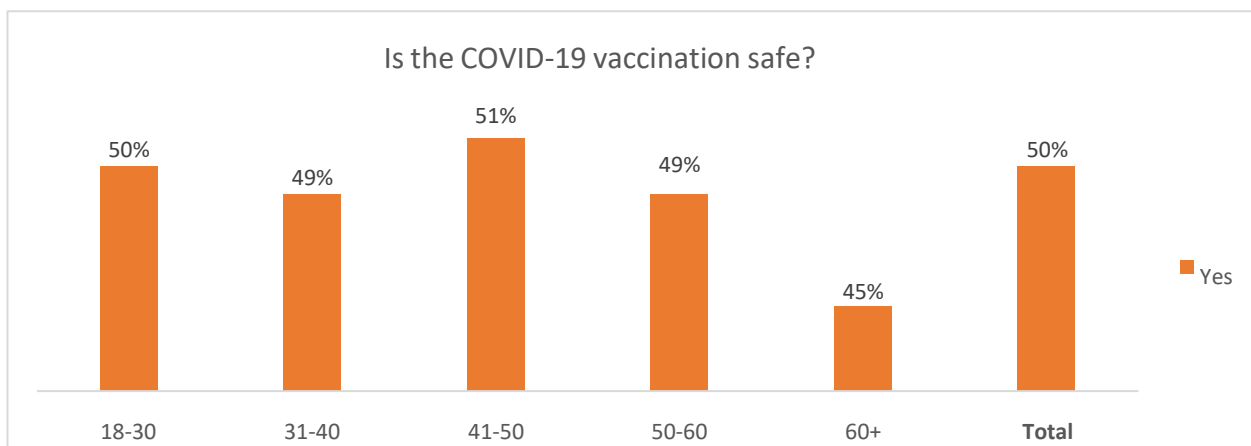


Chart 70: Is the COVID-19 vaccination safe? – Age Group

The perception about the safety of vaccination is lowest in IDPs with 39% (n=1097) of them believing that it is safe, followed by the returnees with 47% (n=634), against the average of 50%.

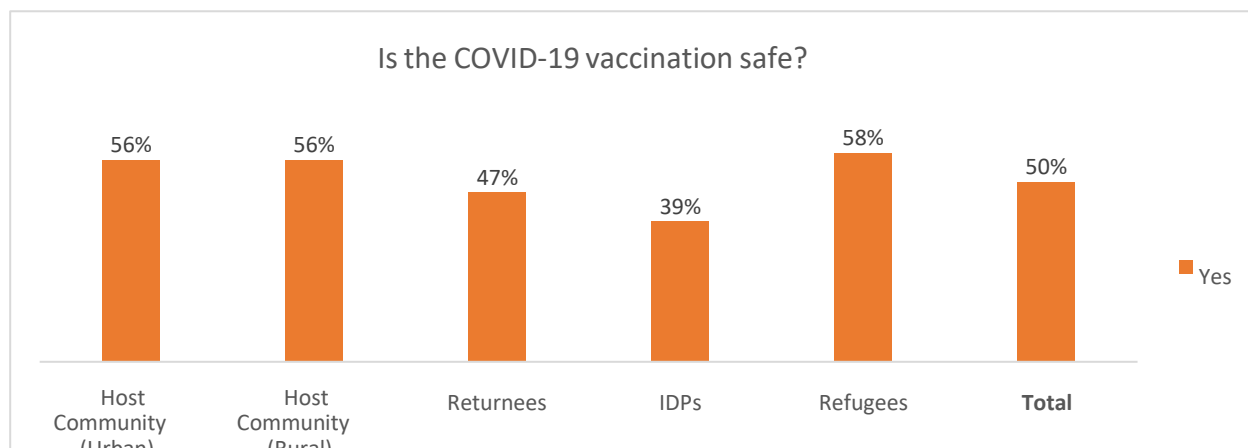
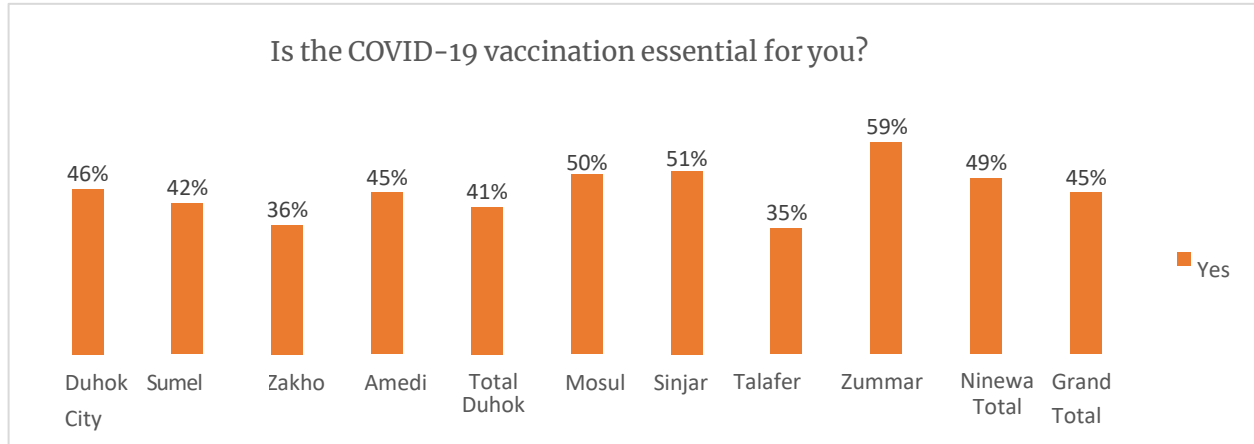


Chart 71: Is the COVID-19 vaccination safe? – Community Segment

How essential is a COVID-19 vaccination?

45% (n=3770) of the respondents, 41% (n=2056) in Duhok and 49% (n=1714) in Ninewa, thought that the COVID-19 vaccine was essential for them. 62% (n=3337, 52% male and 63% female), of respondents who are not yet vaccinated, were not willing to get vaccinated even if the vaccine was easily available.



Sumel

Chart 72: Is the COVID-19 vaccination is essential for you? - Cities

Gender segregation of data shows that 47% male and 42% female respondents thought that the vaccination was essential. The comparison of Duhok and Ninewa with gender segregation is shown in the chart below.

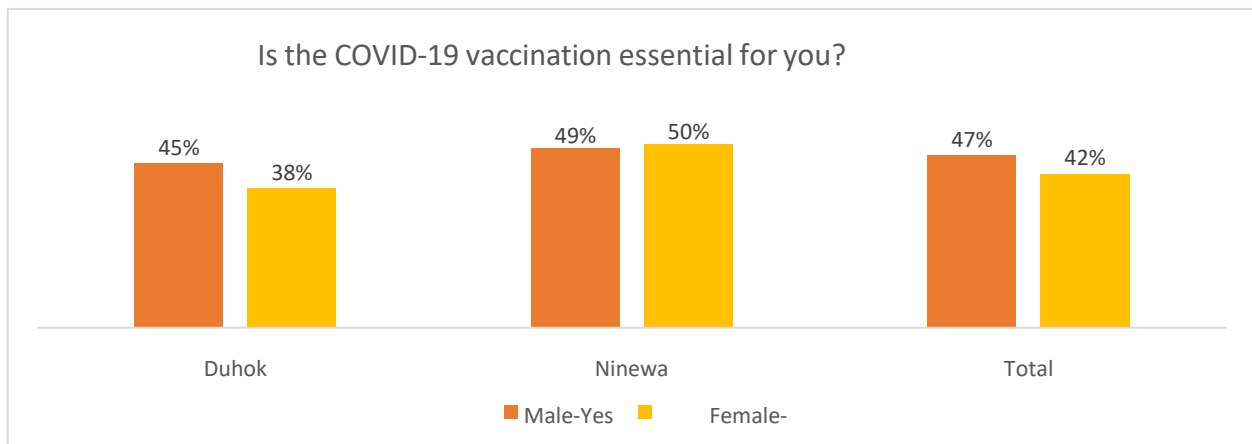


Chart 73: Is the COVID-19 vaccination is essential for you? – Gender by Governorate

Regarding literacy levels, the perception about vaccination to be essential correlates to in literacy levels. 51% (n=1659) of literates, 43% (n=1065) of semi- literates and 38% (n=1033) of illiterate respondents considered the vaccination essential for them.

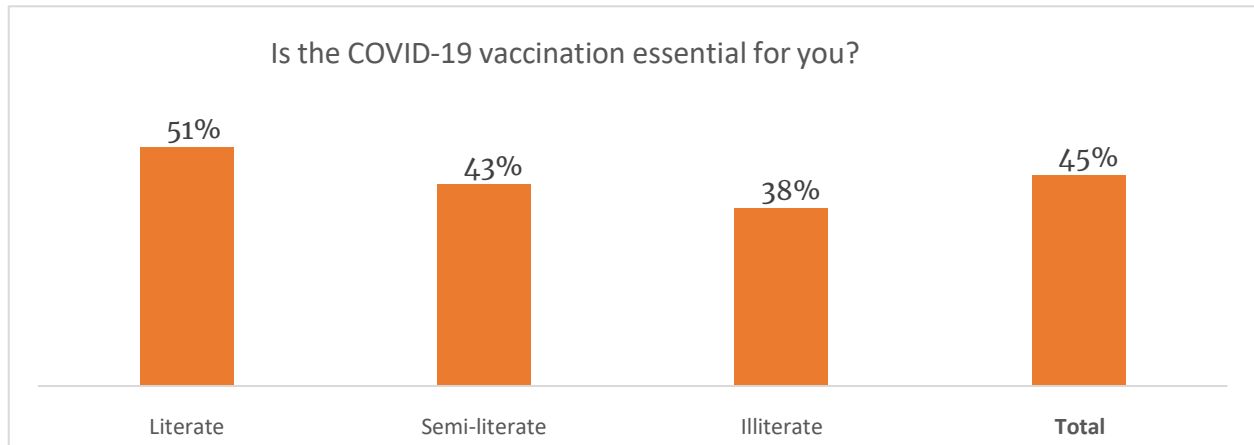


Chart 74: Is the COVID-19 vaccination is essential for you? – Literacy Level

The perception about the vaccination being essential is lowest in religious leaders with 35% (n=23) of them thinking that it is essential, followed by the daily wagers with 38% (n=472).

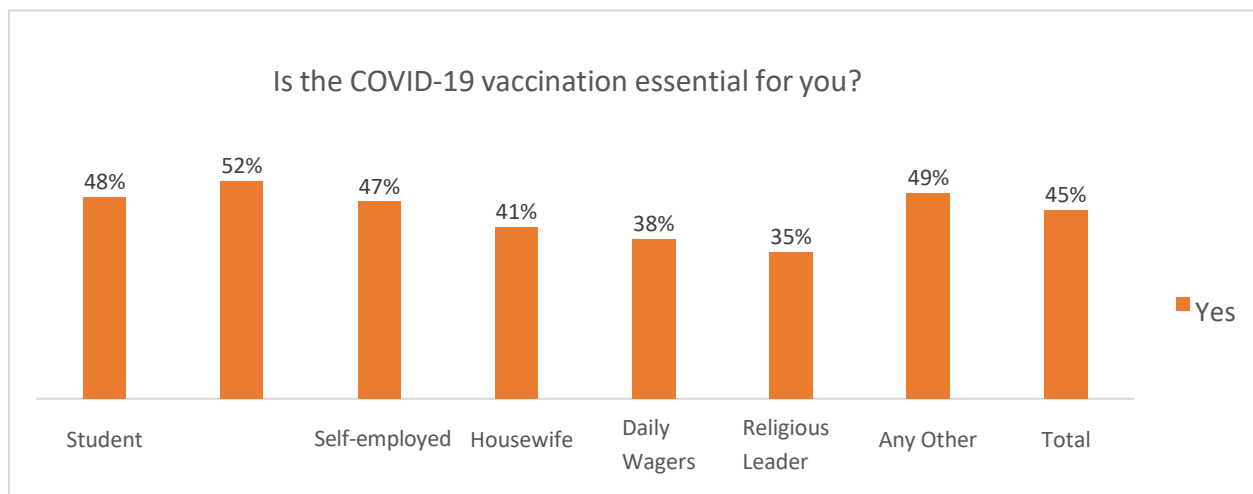


Chart 75: Is the COVID-19 vaccination is essential for you? - Occupation

The analysis of responses shows a relatively even percentage across all age groups.

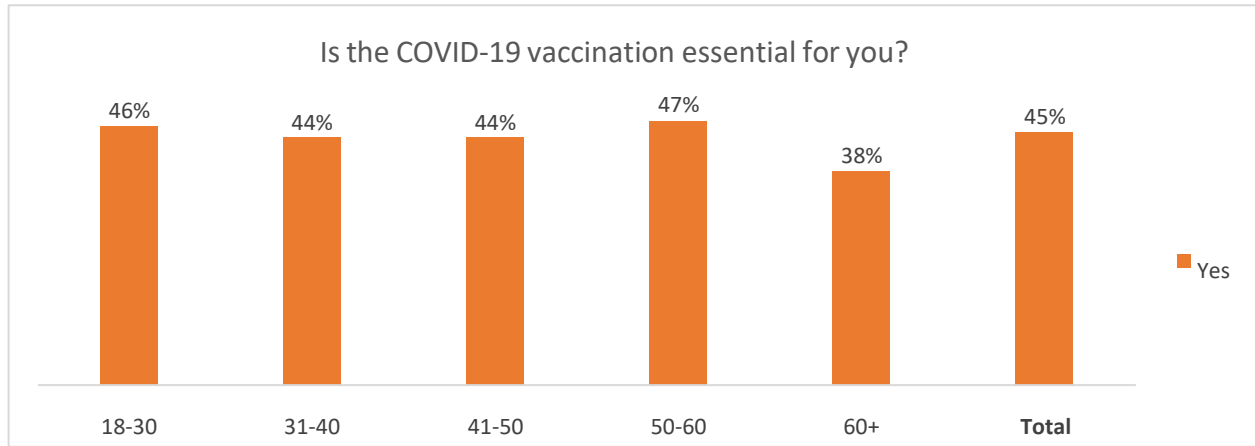


Chart 76: Is the COVID-19 vaccination is essential for you? –Age Group

The rural host community at 55% (n=3770) was the group with the highest number of people who thought that vaccination is essential for them, while IDPs, 37% (n=1097) was the lowest.

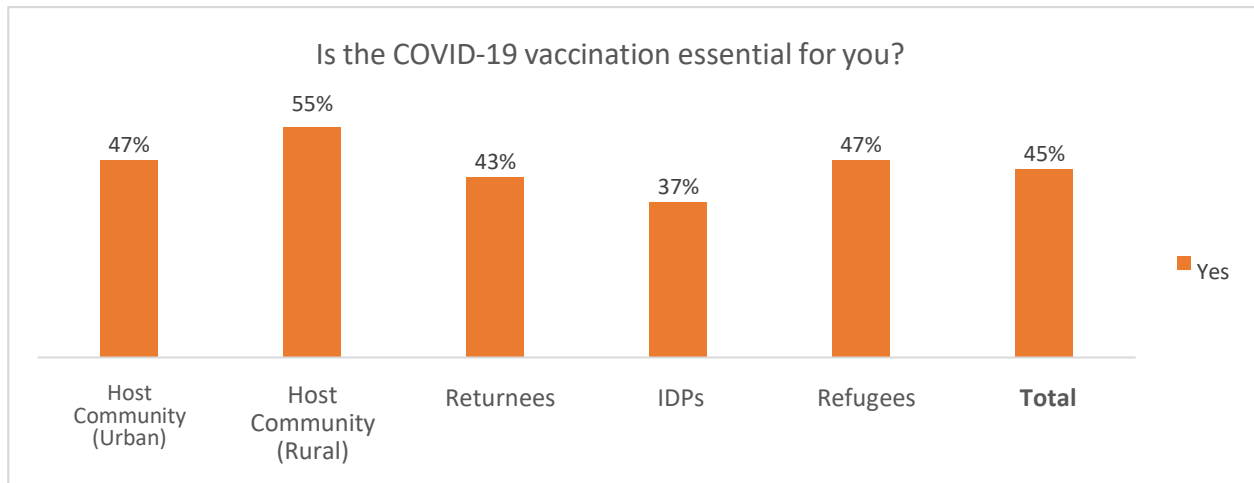


Chart 77: Is the COVID-19 vaccination is essential for you? –Community Segment

Reasons for lack of vaccination uptake

Those who were willing to be vaccinated reported that they faced barriers in getting the vaccine. Of the respondents, 42% (n=826, 32% male and 51% female) stated that the unavailability of the vaccine was the major barrier. Other reasons were fear of side effects, stated by 39% (n=826, 46% male and 32% female) of respondents, and the vaccination centers being far from their places of residence as reported by 19% (n=826, 22% male and 17% female) of respondents.

The respondents from Mosul stated that it took too long to get vaccinated after registration with the Federal Iraq MoH. The study found that waiting times vary from a few days to more than 3 months, depending on the location.

There are also some policy barriers, as reported by the respondents KII's.

These barriers are:

- Availability of one type of vaccine at vaccination centers thus people do not have a choice.
- At some places, the supply of vaccine is interrupted, and registered persons have to wait for longer periods - this was stated more by the respondents from Duhok.
- Vaccine is available only in designated places and not available at public places and at mass level. In some of the cases, the vaccination center is at more than 1 hour from their places of residence.

Assurances required to accept the vaccine and overcoming fears in getting vaccinated

To convince people to accept the vaccine it is necessary to allay their fears. The major fears were side effects and the safety of the vaccine. Some examples of people's fears; are fear of death within 2 to 3 years; fear of becoming infertile (both men and women); and fear of changing of their physical shape.

People preferred one type of vaccine, mainly Pfizer, which was, in most of the cases, not available at the vaccination center near their places of residence. Others were skeptical that the available vaccines were genuine and thought that they may be fake.

The study tried to ascertain which major factors contribute to these fears. The main factors are; rumors and fake news on social media; news about side effects, especially blood clotting and deaths of vaccinated persons; illiteracy and lack of available vaccination knowledge; short timeframe of the vaccine creation without having data or study about long term side effects.

Practices

Whether respondents had registered for vaccination

Of those interviewed 90% (n=3337) had not registered themselves for the vaccine and 81% had not had their family members registered. Concerns about the safety of the vaccines led to 50% of the respondents being reluctant to have themselves and their family members vaccinated. The study showed that 55% were of the view that it was not essential for them to be vaccinated. The data indicated that 66% of refugees and returnees and 65% IDPs were not willing to be vaccinated. This percentage was lower in the host communities (rural and urban) at 57%.

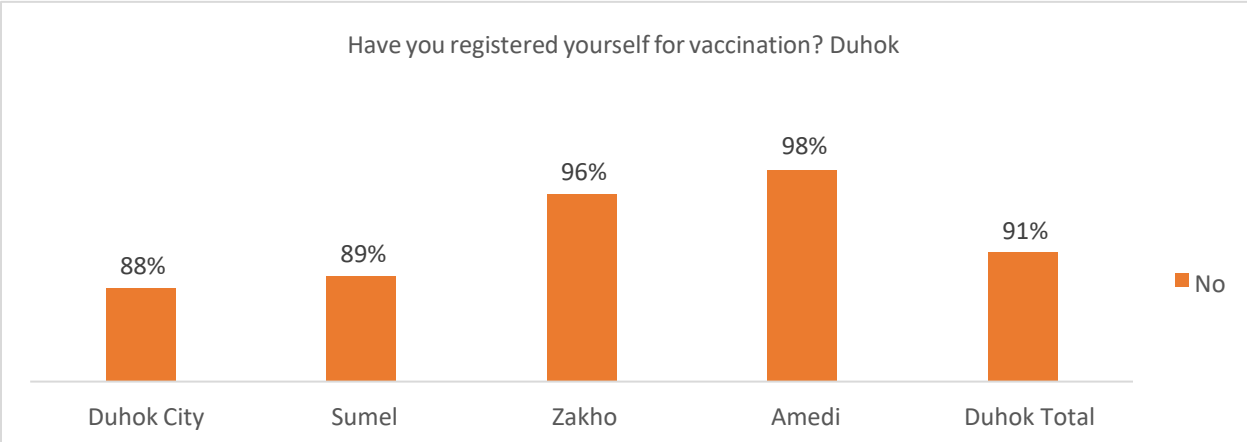


Chart 78: Have you registered yourself for vaccination? – Duhok Locations

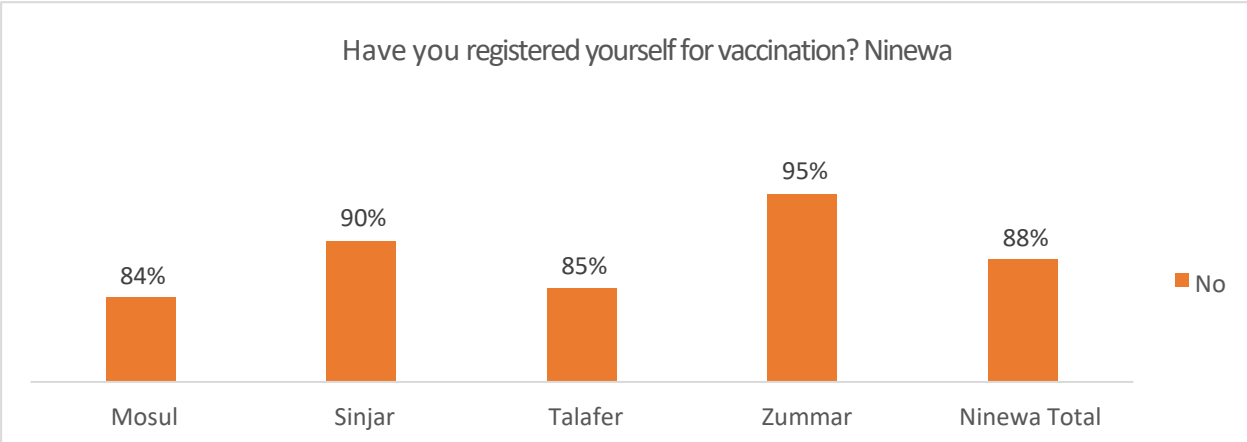


Chart 79: Have you registered yourself for vaccination? – Ninewa Location

The data showed that the rural host community had the lowest rate of registration for vaccination which is at 7% (n=593), followed by refugees, 8% (n=518), and IDPs/returnees, 10%.

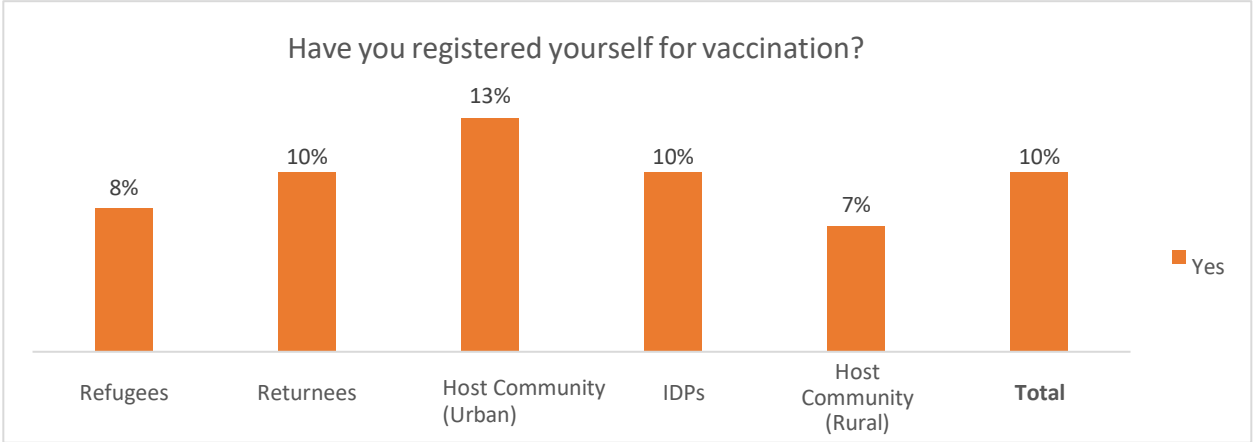


Chart 80: Have you registered yourself for vaccination? – Community Segment

62% (n=3337, 52% male and 63% female) of respondents were still not willing to be vaccinated even if the vaccine was easily available. Gender segregation of the respondents' willingness to take vaccine, if it is easily available, is provided in the chart below.

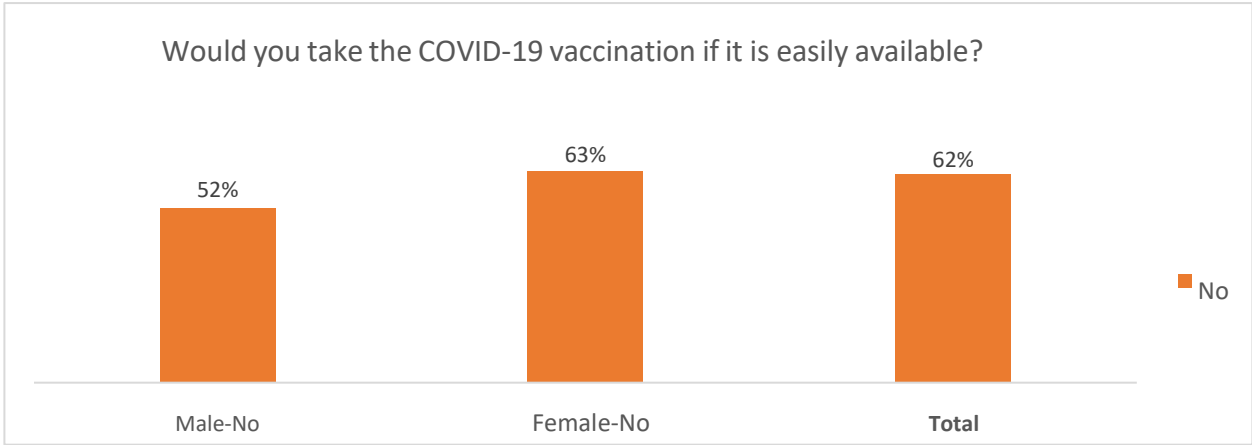


Chart 81: Would you take COVID-19 vaccination without any hesitation if it is easily available? - Gender

The rural host community 56% (n=593) is the most reluctant to be vaccinated followed by the urban host community, 58% (n=928).

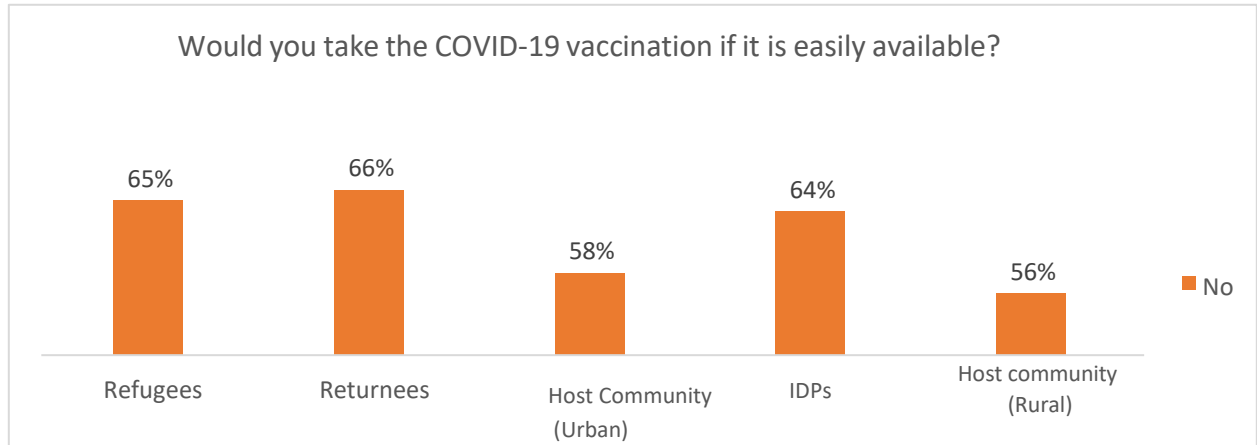


Chart 82: Would you take COVID-19 vaccination without any hesitation if it is easily available? – Community Segment

Those who were vaccinated or willing to be vaccinated

Those respondents who were vaccinated or willing to be vaccinated, gave the following reasons for this; they would be kept safe from catching COVID-19; their employer's made it mandatory to get vaccinated; death of close relatives; having knowledge about the vaccination; relatives or friends had received the vaccine and; messaging from WHO

Vaccination rates

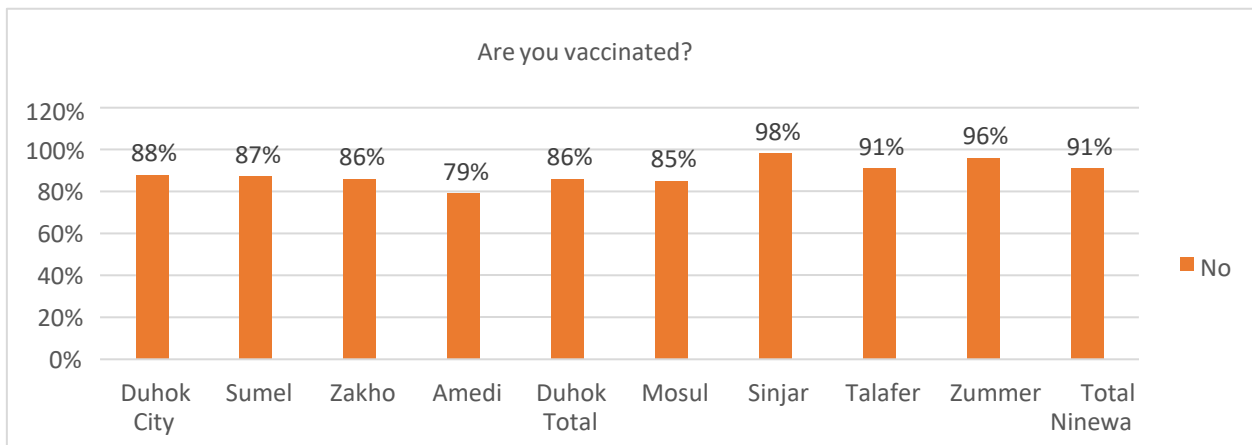


Chart 83: Are you vaccinated? - Locations

The charts below show the gender segregation of respondents from Duhok and Ninewa who were not vaccinated.

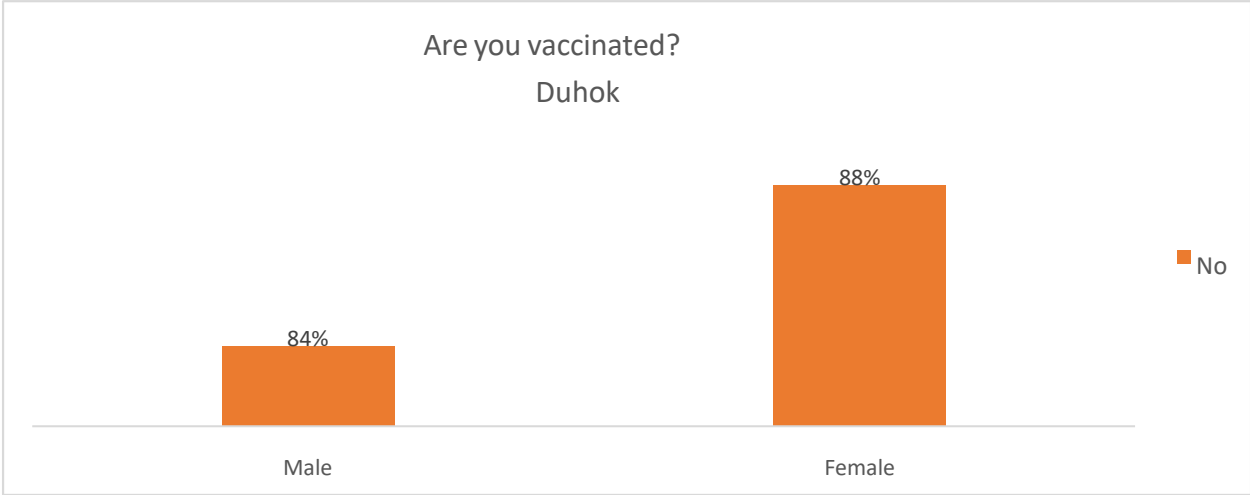


Chart 84 Are you vaccinated - Duhok

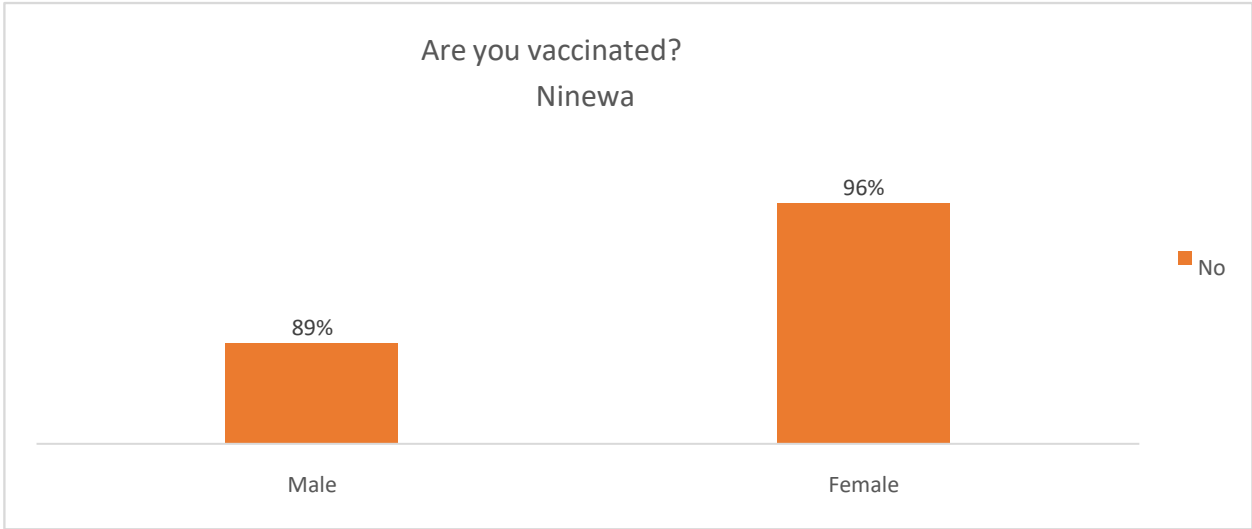


Chart 85 Are you vaccinated – Ninewa

Total gender segregation of respondents who were not vaccinated.

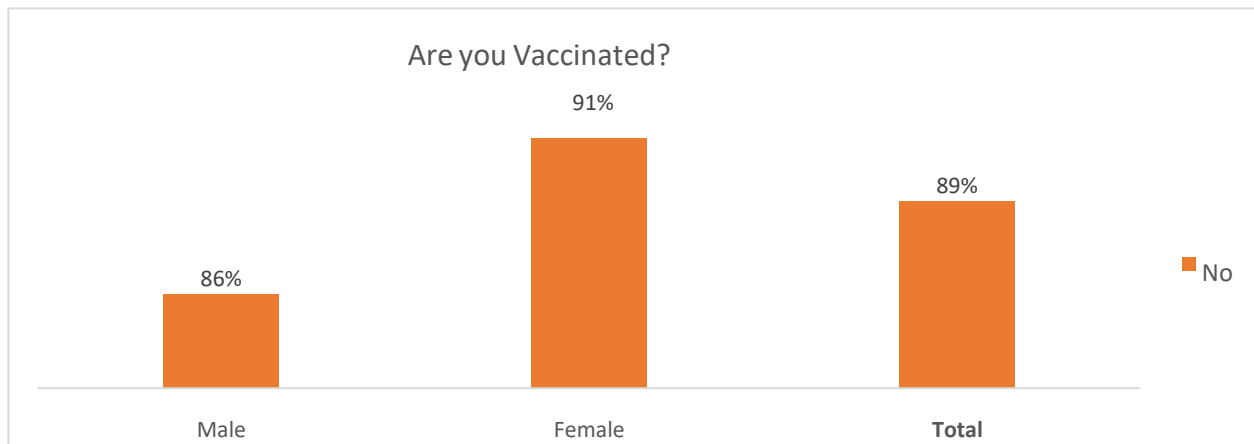


Chart 86: Are you vaccinated? - Gender

Most of the IDPs, 93% (n=1097) were not vaccinated, which is highest amongst all the community segments, followed by the urban host community, of which 88% (n=928) are not vaccinated.

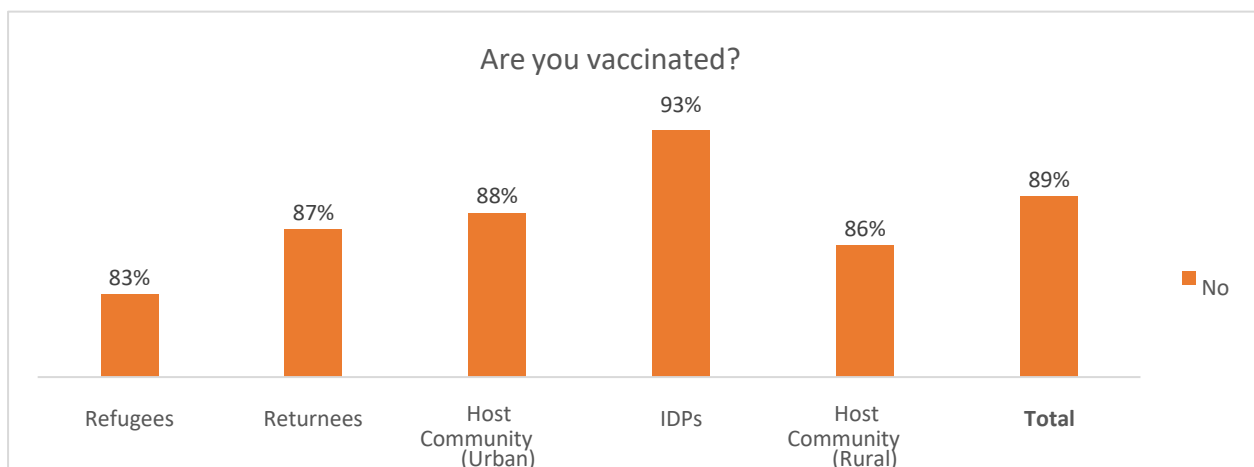


Chart 87: Are you vaccinated? – Community Segment

Symptoms and side effects after vaccination

In 58% (n=433, 55% male and 61% female) of cases, there were no side effects. The major side effects reported were fever, headache, muscular pain and pain at the injection site. The study showed that 71% (n=187, 71% of male and 69% female) of respondents with side effects after vaccination did not consult any doctor.

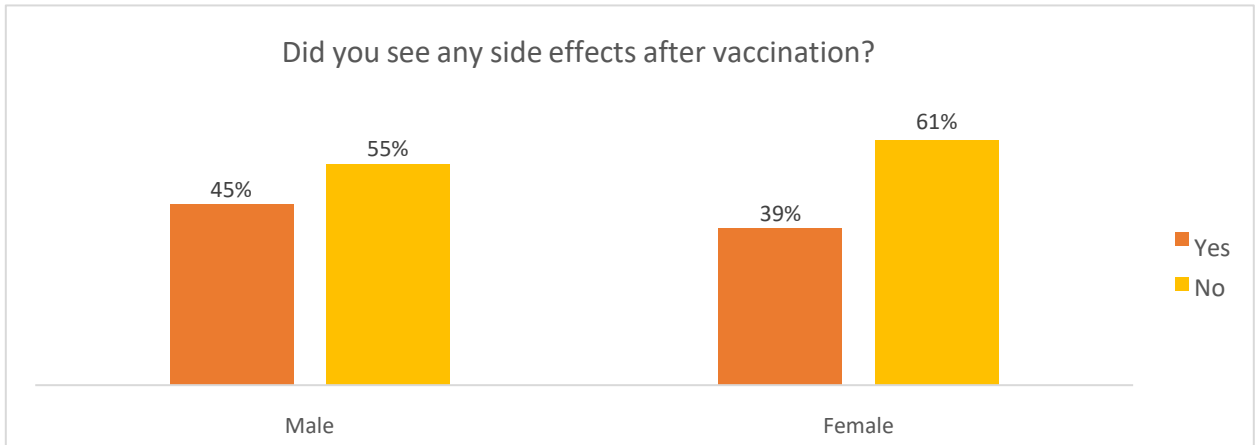


Chart 88: Did you see any side effects after vaccination? - Gender

When asked about the side effects of vaccination, most of the respondents, 35% (n=358), stated that they had fever after taking vaccines, followed by headache, which was reported by 20% of respondents. The percentage of other side effects, including muscular pain, pain at injection site, fatigue, chills and diarrhea, are shown below.

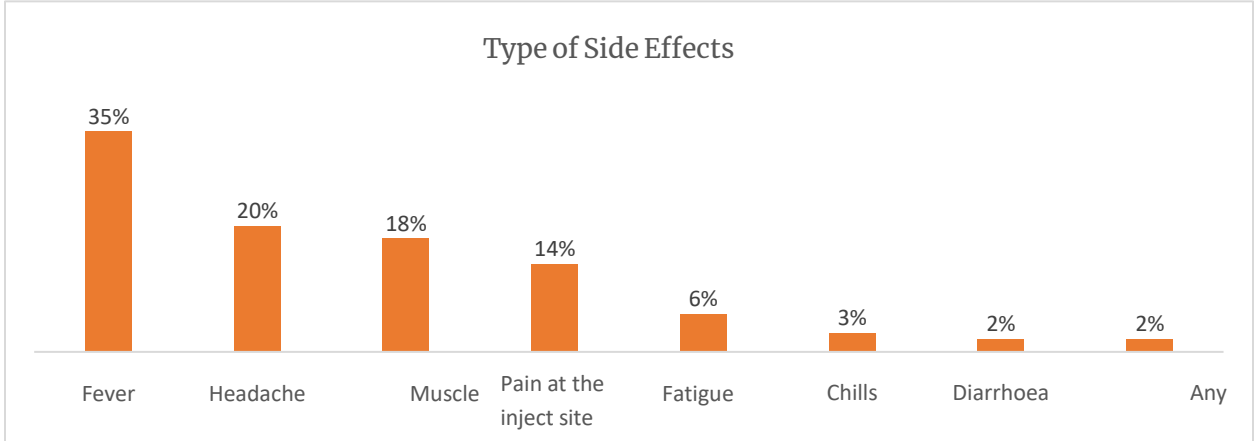


Chart 89: Type of Side Effects

CONCLUSIONS

Knowledge

- Housewives, daily wagers, and religious leaders have less knowledge about COVID-19 than other community groups.
- People from higher age groups (over 60 years old) have less knowledge overall about vaccinations.
- Semi-literates have less knowledge than illiterates.
- Overall, the survey showed a very limited knowledge about the types of vaccine available. This was seen to be especially limited amongst women, those from Sinjar and Sumel, amongst religious leaders and those receiving a daily wage.
- Vaccination centers were placed at a convenient distance from places of residence of most people, except in the case of those from Sinjar where many respondents had to travel for over an hour.
- The majority of those surveyed did not know how to register for vaccination although most of the people had access to the internet and smart phones. IDPs had least access to the internet. Females, religious leaders, and those in the higher age groups, in particular, did not know how to register.
- Most respondents did not know how many times they were required to be vaccinated.
- The trends of using social media and television as their main sources of information were noted for all segments of society.

Attitude

Most of the respondents have a negative attitude towards COVID-19 vaccine due to fears. The main reported fears are:

- The vaccine is not safe and will cause severe side effects.
- The side effects can be life threatening and vaccinated people can die within 2 to 3 years.
- Vaccination will make men and women infertile.
- It is a conspiracy and there are hidden reasons for vaccinating the population.

The main reasons contributing to these fears:

- Rumors and stories circulating in social media.
- News from other countries about side effects of certain vaccines.
- Lack of knowledge about vaccines.

Practice

Most of the respondents were not vaccinated and were unwilling to be. The main reasons for not being willing to be vaccinated were fears of side effects or the belief that it was not essential.

For those who had been vaccinated the reasons for doing so were;

- Respondents wanted to be safe from COVID-19
- They had experienced the death of relatives or friends
- Some respondents had read about COVID-19 and vaccinations from information provided by the WHO
- Some respondents were obliged to receive the vaccine because of their jobs or were instructed to do so by their employer.

RECOMMENDATIONS

- Awareness campaigns should be designed specifically to reach out to the following community segments;
 - People of 60 years and above
 - Daily Wagers
 - Housewives
 - IDPs in the camps
 - Illiterate and semi-literate people
 - Women
- These campaigns should use social media and television to communicate messages related to the benefits of COVID-19 vaccinations to counter the volume of misinformation that is circulating on social media.
- They could include political and religious leaders, famous sports figures, celebrities, health officials and trusted doctors to endorse the value of receiving COVID-19 vaccinations, reassuring the safety of taking them and that there are no major side effects.
- Complementary to these campaigns is a need for more medical based information through the health care system.
- Utilizing the data from the report to focus on the specific findings related to a lack in information for specific community segments of society and locations. For example, IDPs in camps, persons in Sinjar and Sumel.
- Increasing vaccination registration awareness via various channels, inclusive of social media, television, community events.
- Relying on people to register through either the internet or smartphones is insufficient and other mechanisms need to be developed.
- Covid-19 vaccination registration points should be established in areas where internet accessibility is limited for example, in Sinjar.
- Vaccination centers should be no more than 30 minutes from places of residence to improve accessibility. Mobile vaccination units need to be created to give access to vaccinations for those who are unable to travel to vaccination centers e.g. persons with disabilities, elderly, those without means of transportation.

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