Attitude, Awareness, and Knowledge of Saudi Citizens towards COVID-19 Vaccination in Qassim Region – Saudi Arabia

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Original Research Article

ABSTRACT

Cross sectional study was conducted to evaluate the Attitudes and awareness level of Citizens towards COVID-19 vaccination in Qassim region. The present study's results showed that awareness of COVID-19 Vaccination in Qassim region- Saudi Arabia shows that the mean score of awareness was 3.49 (SD 0.864) out of 5. Regarding vaccination decision among Saudi citizens in Qassim region, (22.7%) of the participants were undecided, (14.7%) refused, and (62.6%) agreed to get a vaccine against COVID-19. Reason for vaccine refusal mainly was they don't believe the vaccine. 96 Participants (32.0%) were working in the healthcare sector, (44.8%) of them had received the COVID-19 Vaccine, and (38.5%) refused. The level of awareness among healthcare participants was (80.2%). The average knowledge score was 3.49 (SD =.864) out of a possible 5.

Participants who reported having a graduate level of education had a considerably higher mean knowledge score. The mean score of attitudes was 1.95 (SD=1.176) out of 5, with majority of positive attitude score 62.7%. ((65.7% They received the first dose, and 6.0% they received the first dose and second dose)). Participants with age group 55 years and above years, are more aware towards COVID-19 Vaccination than other age groups. Married persons are more aware towards COVID-19 Vaccination than other categories. Participants with graduate educational level are more aware towards COVID-19 Vaccination than other educational levels. Employed persons are more aware towards COVID-19 Vaccination than other categories. Whereas, there is no relation between age and awareness among Saudi citizens towards COVID-19 (P-value= 0.140). As well, there is no relation between employed citizens and awareness among Saudi citizens towards COVID-19 (P-value =0.136), and there is relation between marital status and awareness among Saudi citizens (P-value = 0.013).

1. BACKGROUND

Coronavirus disease (COVID-19) is a lethal virus that still affects many places throughout the world. The coronavirus disease 2019 (COVID-19) virus is quickly spreading in China, and scientists are working to find effective treatments. (Gao, et al 2020). The second epidemiological report for coronavirus illness (COVID-19), formerly known as novel coronavirus (2019-nCoV), was released in Australia on February 8, 2020, at 19:00 AEDT. It contains information on Australian cases reported for the week ending 8 February 2020 at 19:00 AEDT, as well as information on the international situation and current information on the severity, transmission, and spread of the COVID-19 virus. (NIRST 2020).

Vaccine uptake, particularly universal vaccine adoption, is a social enterprise that necessitates the study of human variables. The 23-person Working Group on Readying Populations for COVID-19 Vaccines was organised to give a starting point for this crucial component of a future COVID-19 immunisation campaign in the United States. A synthesis of the primary difficulties and possibilities connected with a potential COVID-19 immunisation campaign, as well as empirically-informed recommendations to improve public understanding of, access to, and acceptance of vaccinations that protect against SARS-CoV-2, is one of the group's outcomes. While this list isn't exhaustive, it does cover the majority of the steps that should or should be taken [1].

A recent contagious respiratory infectious disease produced by a novel coronavirus (SARS-CoV-2) that has the same veiled RNA structure as SARS-CoV-1 that triggered the severe acute respiratory syndrome (SARS) outbreak has caused a large global human calamity. The World Health Organization (WHO) has classified it as a pandemic. The date is March 12, 2020. COVID-19 instances were first discovered in Wuhan, China, at the end of December 2019. The virus has now infected almost every country on the planet, and the number of deaths is rapidly rising. Globally, about 3.5 million cases and 245,258 deaths had been documented as of May 3rd, 2020. The African continent was the least affected at the time of the study, with 43,909 cases and 1764 fatalities, but the numbers were rising. Since March 8, 2020, cases have been reported in the Democratic Republic of the Congo (DRC), which is located in Central Africa. The DRC reported 7379 cases and 182 deaths as of July 3, 2020. While social isolation and quarantine may help to limit the transmission of the virus and flatten the epidemic curve, they may not be enough to totally stop it [2]. COVID-19 is a lethal virus that still affects many places throughout the world. A COVID-19 vaccine is being developed to counteract the disease's spread and terrible effects is still ongoing, and other, As the epidemic progresses, more effective vaccines are likely to be developed. The study's objective is to was to evaluate the Attitudes and level of awareness of Citizens towards COVID-19 vaccination in Qassim region.

1.2 Problem Statement

One of the most important challenges faced by the Ministry of Health is awareness of Citizens about the COVID-19 vaccination.

1.3 Research Questions

- What are the Attitudes, level of awareness, and knowledge of Citizens towards COVID-19 vaccination in Qassim region?

1.4 Research Objective

- To evaluate the Attitudes, level of awareness, and knowledge of Citizens towards COVID- 19 vaccination in Qassim region.

2. LITERATURE REVIEW

2.1 Introduction

The WHO Technical Advisory Group on Behavioral Insights and Sciences for Health met with the WHO Department of Immunization, Vaccines, and Biologicals on October 15, 2020, to address behavioural factors in relation to COVID-19 vaccine acceptance and uptake. The conversation centred on a series of fundamental concerns about using evidence-based and behaviorally informed techniques to achieve high and equitable vaccine uptake. This meeting report is the result of the WHO TAG members' discussion at the meeting. It solely includes the subjects that were discussed during the meeting. Following the meeting, the members' thoughts and recommendations were recorded [3].

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)-caused Coronavirus Disease 2019 (COVID-19) has recently become a pandemic. Because SARS-sudden CoV-2's debut and quick expansion endangers world health and the economy, efforts to restrict the virus's transmission are urgently needed. Various diagnostic kits to test for SARS-CoV-2 are already available for use in order to expedite appropriate treatment and minimise the virus's transmission. Several medicines have shown in vitro efficacy or possible clinical effects against SARS-CoV-2. Furthermore, universities and organisations all around the world are working feverishly to discover therapies and vaccinations to combat the disease [4].

There is widespread agreement that developing a COVID-19 vaccine is the most effective way to contain the COVID-19 pandemic in the long run. The quick creation of vaccine candidates and beginning of trials is the consequence of an extraordinary research effort and global collaboration. We look at the different types of vaccines and the progress of ten vaccine candidates against SARS-CoV-2, the virus that causes COVID-19, that are now in early phase human studies. We also evaluate the numerous hurdles of producing and distributing a novel vaccine on a global scale, and advise caution in our estimates for the timeline ahead [5].

Could COVID-19 immunizations make people more susceptible to ADE (antibody-dependent enhanced) breakthrough infections? This is improbable because coronavirus infections in humans lack the clinical, epidemiological, molecular, and pathological characteristics of dengue viruses' ADE sickness (DENV). SARS and MERS CoVs, unlike DENV, primarily infect respiratory epithelium rather than macrophages. The focus of severe disease is on elderly people with preexisting problems, rather than newborns or people who have had previous coronavirus infections. Animals given SARS or MERS immunizations developed vaccine hypersensitivity responses (VAH), which were comparable to those seen in humans given inactivated measles or respite vaccines [6].

2.2 Awareness

Awareness is the knowledge of your condition or work, or effects of your condition [7]. Awareness is the state or capacity to experience events, objects, or sensory patterns, to sense, or to be aware of them. Sense data may be verified by an observer at this stage of consciousness without inherently suggesting comprehension. More generally, it is the condition or quality of being conscious of something. Awareness is characterized in biological psychology as the perception and cognitive reaction of a person or animal to a situation or event. There is a contrast between two different current definitions of awareness. In recent masked-prime study, an ability to make forced-choice decisions above the production level of success is considered a significant factor. The second definition, suggested by Henley [8], is subjective and specifically equates an observer's experience of stimuli with self-reports that measure conscious awareness. "It is found that a better objective measurement of awareness is required, in order to distinguish between the two different subjective states of seeing and not seeing [9].

2.3 Vaccine Refusal

Some have pondered, in the early months of the COVID-19 outbreak, if the power of this worldwide experience will solve the problem of vaccine rejection, which has plagued the global public health community for decades. The job that vaccination programmes accomplish for the community—social, political, and moral as well as biological—determines public trust in them [10]). Most of the participants were hesitant about COVID-19 vaccines. The most common

reasons for refusal were anxiety about vaccine side effects, lack of knowledge about the effectiveness of vaccines, and distrust of vaccines originating from abroad [11].

3. METHODOLOGY

3.1 Introduction

The understanding of the basic aspects of methodology is essential for any researcher. (Garg, 2016). Research is a systematic process, which uses scientific methods to generate new knowledge that can be used to solve a query or improve on the existing system. (Bhaskar and Manjuladevi, 2016). This chapter aims to provide an understanding of the research methodology and design used to achieve the research objectives discussed in chapter one. This study will be conducted by quantitative method, to arrive at a better understanding of attitudes and awareness of Citizens towards COVID-19 vaccination in Qassim region.

3.2 Research Design

A cross-sectional study design will be conducted from March to May, 2021, using questionnaire. Sample size is n=300 randomly sampling. The collected quantitative data will be descriptive statistics; *t*-test will be done to examine if there is a significant difference in means (SD) for the participants. Chi- square to determine if there is significant association between social demography and the awareness toward COVID-19 vaccination**.** The collected data will be analyzed using SPSS, version 20.

3.3 Sample Size

Calculating the sample size is essential to reduce the cost of a study and to prove the hypothesis effectively [12]. Calculating the sample size is a most important determinant of statistical power of a study. A study with inadequate power, unless being conducted as a safety and feasibility study, is unethical [13]. The participant sample size will be determined using Electronic Sample Size Calculator. Based on the online calculator and the appropriate sample size for this study is (*n*) = 300 individuals.

3.4 Study Location

The study will be conducted in Qassim region. Qassim region is located at the center of the country, Qassim is an agricultural region. Buraidah, the capital of the Qassim province, plays a major role in the production of dates in the KSA. It is known as the "alimental basket" of the country, because of its agricultural assets. Qassim has an area of 73,000 km² and a population of 1,387,996. Of this population, 991,032 are Saudi (71.40%), and 396,964 are non-Saudi (28.60%). The population of Qassim represents 4.37 % of the total population of the KSA.

3.5 Target Population

All Saudi Citizens living in Qassim region. The target population for this research is (300) Saudi citizens who are living in Qassim region. Buraydah, Unizah, Al Rass, Badaea, Al Methnab, and other cities located in Qassim region.

    a. Inclusion Criteria:
- Age 18 and above
- Saudi Nationality.
- Living in Qassim region
    b. Exclusion Criteria:
- Below age 18 years
- Non- Saudi Nationality.
- Living out of Qassim region

3.7 Research Variables

There are many independent variables and dependent variable in this research. The variables are listed below.

3.7.1 Dependent variable

There is dependent variable in this research. The dependent variable is "Attitudes and awareness of Citizens towards COVID-19 Vaccination"

3.7.2 Independent variables

There are six independent variables in this research. The variables are listed below.

   i. Age
   ii. Gender
   iii. Marital Status
   iv. Education level
   v. Occupation
   vi. Household Size

3.8 Research Instrument

In this study, paper questionnaire will be applied. A questionnaire is a research instrument

consisting of a series of questions and other prompts for the purpose of gathering information from respondents [14]. The English instrument that will be used in this study "The Public Citizen Survey of COVID-19 Vaccine" from The University of Nevada, Reno School of Medicine, University of Nevada, Reno School of Community Health Sciences, to collect information on participant knowledge and attitudes about COVID-19 vaccines. The translated into Arabic language and validated questionnaire Arabic version will be used for this study.

4. RESULT

4.1 Introduction

For any researcher, understanding the basic aspects of methods is important (Garg 2016). Study is a systematic process that uses scientific techniques to produce new information that can be used to address a query or develop the current framework" (Bhaskar & Manjuladevi 2016). The purpose of this chapter is to provide an interpretation of the study methodology and design used to achieve the research objectives that were discussed in the chapter I.

For conducting the research survey- paper questionnaire with Qasssim region citizens . A convenience sample of 300 participants agreed to participate in the questionnaire, which we used to evaluate the Attitudes and level of awareness of Citizens towards COVID-19 vaccination in Qassim region. The approval letter was issued by decision No.(H-04-Q-001) on the 08th of March, 2021 from Central IRB-MOH (Department of research, Qassim health affairs, Saudi Arabia).

4.2 Research Design

For this study, a cross-sectional design was used with the quantitative method (questionnaire), to evaluate the Attitudes and level of awareness of Citizens towards COVID-19 vaccination in Qassim region. The data collection occurred between the 10th March to 31st May, 2021 . The sample consisted of simple randomly sampled Saudi citizens living in Qassim region. The sample size of this study is (n=300).

4.3 Study Location

Study location appears to play a vital role in research between two different cities. This research was done in Saudi Arabia- KSA, with the target population is citizens of Qassim region. The KSA comprises 13 administrative regions, and each region is divided into governorates. Qassim region is located at the center of the country, Qassim is an agricultural region. Buraidah, the capital of the Qassim province, plays a major role in the production of dates in the KSA. It is known as the country's "food basket", because of its agricultural assets.

4.4 Sample Size

The sample size for this study was calculated using The Statistic Calculation Software, with a total of n=300, with the power of this study is 0.8 (80%) that was calculated by G* Power software. The collected data will be analyzed using (SPSS) version 20.

4.5 Target Population

The target population for this study is all Saudi citizens of Qassim region below 18 years.

4.6 Research Instrument

A questionnaire is a study method consisting of a set of questions and other instructions to obtain data from participants [14]. The instrument that adopted and used in the study was the University of Nevada, Reno School of Medicine, Reno School of Community Health Sciences to evaluate the Attitudes and level of awareness of Citizens towards COVID-19 vaccination in Qassim region. This instrument is written originally in English and was prepared for using in society of an English- speaking. Using it in some other language demands that the instrument be translated into the language of the target community. Prior to its use for data collection, the instrument was translated by the researcher from original language (English) to Arabic and for validated it to ensure the functional equivalence in the two languages of its questions.

4.7 Data Analysis

4.7.1 Measurement

COVID-19 vaccine awareness was assessed using a survey method and guidelines. The questionnaire about awareness had 3 items as presented in Table 3 with a category ("Yes", "No", "Don't know"). The awareness level was assessed by the answer and the knowledge level indicated by four

categories: Poor, Average, good and very good. Q1: Are you aware of the novel coronavirus COVID-19 pandemic? Q2: 16. How would you rate your knowledge level on novel coronavirus/ COVID-19? Q3: Please select the answer depending on how much you agree with the statement below; - If a vaccine for COVID-19 becomes available and is recommended for me, I would get it; (1) Strongly Disagree, (2) Disagree, (3) Neither agree nor disagree, (4) Agree, (5) Strongly agree, and (6) Don't know.

4.7.2 Characteristics of the sample

Of the 300 participants from Qassim region invited to participate in the study, 300 (100%) returned the questionnaires. The sample consisted of (77.0 %) males and (23.0%) females. Approximately, more than half of the participants (56.3%) were from Buraydah City whereas (43.7.0%) were from the other cities in Qassim region. Furthermore, the most common age group was 35-44 years (37.7%), followed by 25-34 years (35.7%). The majority of the participants (83.0%) were married. With regards to the educational level of participants, (39.7%)had a bachelor's degree. Regarding employment status, the majority of the participants (89.3%) were employed, whereas (6.7%) were unemploed, and (4.0%) were Retired. The majority of the household size members (44.0%) were 4-6 Persons, followed by (38.7%) were 7-9 Persons in the family.

Table 1. Frequency of respondents

Variable	Variable's Category	n	%
	Buraydah	169	56.3%
	Unizah	52	17.3%
	Bukayriah	14	4.7%
	AlRass	34	11.3%
Region	Bada'ia	7	2.3%
	Methnab	9	3.0%
	Riyadh AlKhabra	4	1.3%
	Other	11	3.7%
	Total	**300**	**100.0%**
	Male	231	77.0%
Gender	Female	69	23.0%
	Total	**300**	**100.0%**
	18-24 years	10	3.3%
	25-34 years	107	35.7%
Age	35-44 years	113	37.7%
	45-54 years	40	13.3%
	55 years and above	30	10.0%
	Total	**300**	**100.0%**
	Single	42	14.0%
Marital Status	Married	249	83.0%
	Other	9	3.0%
	Total	**300**	**100.0%**
	Less than secondary	24	8.0%
	Secondary	89	29.7%
Educational Level	Diploma	45	15.0%
	University	119	39.7%
	Gradate	23	7.7%
	Total	**300**	**100.0%**
	1-3 Persons	22	7.3%
	4-6 Persons	132	44.0%
Family Size	7-9 Persons	116	38.7%
	10 Persons & more	30	10.0%
	Total	**300**	**100.0%**
	Employee	268	89.3%
Employment	Unemployed	20	6.7%
	Retired	12	4.0%
	Total	**300**	**100.0%**

4.7.3 Awareness level among Saudi Citizens towards COVID-19 vaccination

The present study's results showed that awareness of COVID-19 Vaccination in Qassim region- Saudi Arabia shows that The mean score of awareness was 3.49 (SD 0.864) out of 5 as shown in Table 2

Table 2. Result of overall awareness among citizens

N	Mean (SD)
300	3.49 (0.864)

Regarding vaccination decision among Saudi citizens in Qassim region, (22.7%) of the participants were undecided, (14.7%) refused, and (62.6%) agreed to get a vaccine against COVID-19. Reason for vaccine refusal mainly was they don't believe the vaccine. 96 Participants (32.0%) were working in the healthcare sector, (44.8%) of them had received the COVID-19 Vaccine, and (38.5%) refused. The level of awareness among healthcare participants was (80.2%).

In this study, most of the respondents (67.0%) were aware towards COVID-19 vaccination, and oppositely, (33.0%) not aware. Female participants are more aware towards COVID-19 Vaccination than male participants (p<0.001), as shown in Table 3. & Fig.1.

Participants with married status are more aware towards COVID-19 Vaccination than other age groups. Employed persons are more aware towards COVID-19 Vaccination than other categories. Whereas, there is no relation between employed and awareness among Saudi citizens towards COVID-19, and there is relation between marital status and awareness among Saudi citizens. As shown in Table 4 and Table 5.
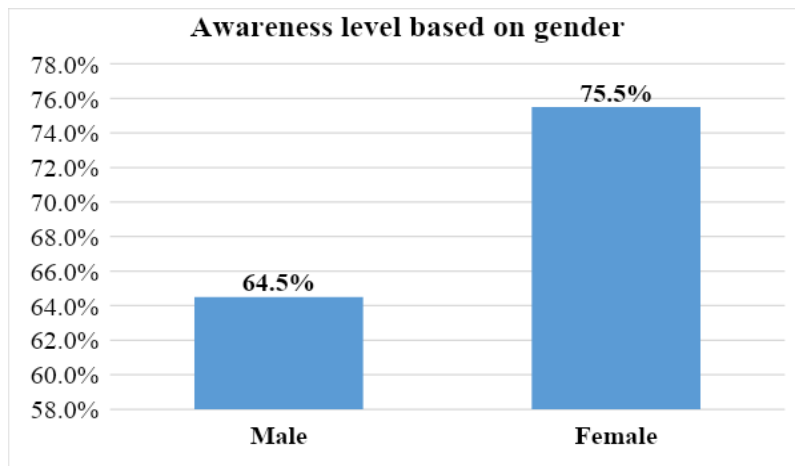

Fig. 1. Awareness level based on gender

Table 3. Awareness level based on gender

Awarness	Male		Female		Total		P-value
	n	%	n	%	n	%	
Yes	149	64.5%	52	75.4%	201	67.0%	
No	55	23.9%	11	15.9%	66	22.0%	**< 0.001**
Don't know	27	11.6%	6	8.7%	33	11.0%	
Total	231	100.0%	69	100.0%	300	100.0%	

Table 4. The relation between marital status and awareness

Awarness	Single		Married		Other		Total		X^2	P-value
	n	%	n	%	n	%	n	%		
Yes	25	59.5%	173	69.5%	3	33.3%	201	67.0%		
No	11	26.2%	49	19.7%	6	66.6%	66	22.0%		
Don't know	6	14.3%	27	10.8%	0	00.0%	33	11.0%	**12.6**	**0.013**
Total	42	100.0%	249	100.0%	9	100.0%	300	100.0%		

Table 5. The relation between employment and awareness

Awarness	Employeed		Unemployeed		Retired		Total		X^2	P-value
	n	%	n	%	n	%	n	%		
Yes	184	68.6%	13	65.0%	4	33.3%	201	67.0%		
No	57	21.3%	4	20.0%	5	41.7%	66	22.0%	7.00	0.136
Don't know	27	10.1%	3	15.0%	3	25.0%	33	11.0%		
Total	268	100.0%	20	100.0%	12	100.0%	300	100.0%		

Table 6. The Relation between age and awareness

Are you aware of the novel COVID-19 pandemic?				Total	X^2	P-value
	Yes	No	Don't know			
18-24 years	4	2	4	10		
25-34 years	73	27	7	107		
35-44 years	76	23	14	113	12.26	.140
45-54 years	26	9	5	40		
55 years and above	22	5	3	30		
Total	201	66	33	300		

Participants with age group 55 years and above years, are more aware towards COVID-19 Vaccination than other age groups. Married persons are more aware towards COVID-19 Vaccination than other categories. Participants with graduate educational level are more aware towards COVID-19 Vaccination than other educational levels. Whereas, there is no relation between age and awareness among Saudi citizens towards COVID-19, "Are you aware of the novel COVID-19 Pandemic? As shown in Table 6.

4.7.4 Knowledge towards the COVID-19 vaccine

The distribution of each knowledge item about the COVID-19 vaccine are presented in Table 7. The mean score of knowledge was 3.49 (SD = .864) out of 5.

The mean score of knowledge was significantly higher among participants who reported having graduate level of education, Table 9.

Table 7. The mean score of knowledge

Knowledge level	N	Mean (SD)
	300	3.49 (.864)

4.7.5 Attitude towards COVID-19 vaccine

The distribution of each of the awareness items towards the COVID-19 vaccine is presented in Fig. 4.1. When participants were asked about their attitudes towards COVID-19 vaccination, 44 participants (22.7%) They do not believe the COVID-19 vaccination.
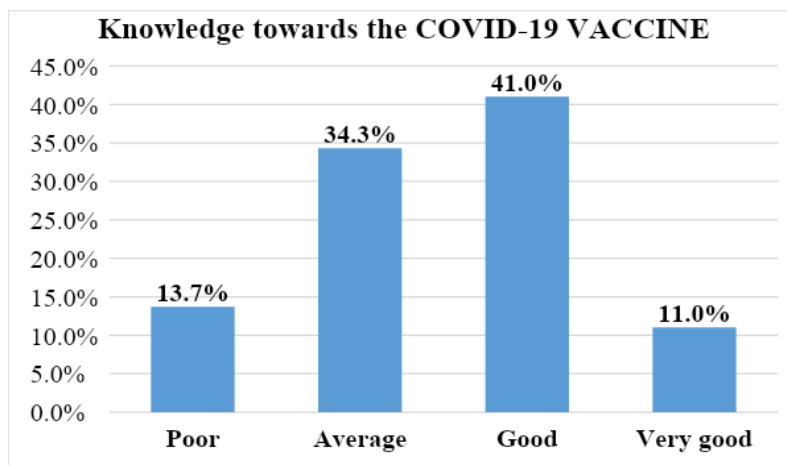

Fig. 2. Knowledge towards the COVID-19 vaccine

Table 8. Frequency of knowledge item

	n	%	t-test	P-value
Poor	41	13.7%		
Average	103	34.3%		
Good	123	41.0%	70.064	0.001
Very good	33	11.0%		
Total	300	100.0%		

Table 9. Level of knowledge based on educational level

Educational level	Poor	Average	Good	Very good
Less than secondary	6(14.6%)	12(11.6%)	6(4.9%)	0(00.0%)
Secondary	14(34.2%)	38(36.9%)	33(26.8%)	4(12.1%)
Diploma	6(14.6%)	12(11.6%)	25(20.3%)	2(6.1%)
University	15(36.6%)	38(36.9%)	53(43.1%)	13(39.4%)
Graduate	0(00.0%)	3(3.0%)	6(4.9%)	14(42.4%)
Total	41(100.0%)	103(100.0%)	123(100.0%)	33(100.0%)

Table 10. Attitudes towards COVID-19 vaccination

	n	%	*T*-test	P-value
Yes, I received the first dose	170	56.7%		
Yes, I received the first dose and second dose	18	6.0%	28.775	.001
No, neither dose	68	22.7%		
No, don't believe it	44	14.7%		
Total	300	100.0%		

The mean score of attitudes was 1.95 (SD=1.176) out of 4, with majority of positive attitude score was 62.7%. (65.7% They received the first dose, and 6.0% they received the first dose and second dose).

5. CONCLUSION

The study drew 300 individuals from the Qassim district, and 300 (100%) of them returned the questionnaires. The sample was (77.0 %) males and (23.0%) females. Approximately, more than half of the participants (56.3%) were from Buraydah City whereas (43.7.0%) were from the other cities in Qassim region. The present study's results showed that awareness of COVID-19 Vaccination in Qassim region- Saudi Arabia shows that the mean score of awareness was 3.49 (SD 0.864) out of 5. Regarding vaccination decision among Saudi citizens in Qassim region, (22.7%) of the participants were undecided, (14.7%) refused, and (62.6%) agreed to get a vaccine against COVID-19. Reason for vaccine refusal mainly was they don't believe the vaccine. 96 Participants (32.0%) were working in the healthcare sector, (44.8%) of them had received the COVID-19 Vaccine, and (38.5%) refused. The level of awareness among healthcare participants was (80.2%). The mean score of knowledge was 3.49 (SD = .864) out of 5. Participants who reported having a graduate level of education had a considerably higher mean knowledge score. The mean score of attitudes was 1.95 (SD=1.176) out of 4, with majority of positive attitude score 62.7%. (65.7% They received the first dose, and 6.0% they received the first dose and second dose). Participants with age group 55 years and above years, are more aware towards COVID-19 Vaccination than other age groups. Married persons are more aware towards COVID-19 Vaccination than other categories. Participants with graduate educational level are more aware towards COVID-19 Vaccination than other educational levels. Employed persons are more aware towards COVID-19 Vaccination than other categories. Whereas, there is no relation between age and awareness among Saudi citizens towards COVID-19 (P-value= 0.140). There is no relation between employed and awareness among Saudi citizens towards COVID-19 (P-value =0.136), and there is relation between marital status and awareness among Saudi citizens (P-value = 0.013).

6. THE RECOMMENDATION

This study recommends for urgent need to implement a comprehensive training courses and workshop of infection control for COVID–19 across all healthcare professionals (Especially, the administrative employees), and also for citizens through different ways to achieve a sustainable healthcare service with knowledge and awareness in infection control management and new communicable infections.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The approval letter was issued by decision No.(H-04-Q-001) on the 08th of March, 2021 from Central IRB-MOH (Department of research, Qassim health affairs, Saudi Arabia).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDIX A

Questionnaire- English version

Dear participant;

In the importance of your opinions and participation, could you please give us part of valuable time to fill this questionnaire? This questionnaire is to evaluate Attitude and Awareness of Citizens Towards COVID-19 Vaccination in Qassim Region
I am informing you that your answer would be treated as confidential and you will take about ten minutes of your time to complete this questionnaire.
Grateful and appreciate your help for full it up.

Best Regards.
Abdulaziz A. Al-Salem

_____

1. What city do you live in?

O Buraydah
O Unizah
O Al-Rass
O Al Badaea
O Al Methnab
O Riyadh Al khabra
O Other

2. Gender

O Male
O Female

3. Age

O 18-24
O 25-34
O 35-44
O 45-54
O 55+

4. Marital status

O Married
O Single
O Other

5. Education Level

O No high school
O High school
O Some college
O College
O Graduate/ Professional

6. Household size

O 1-3 Persons
O 4-6 Persons
O 7- 9 Persons
O => 10 Persons

7. What is your current employment status?

O Employed
O Unemployed
O Retired

8. Do you work as a healthcare provider (e.g. Physician, Nurse, Administrative,…etc)

O Yes
O No

9. Do you have a chronic illness?

O Yes
O No

10. Have you been vaccinated against influenza (the flu) in the last year?

O Yes
O No
O Don't know

11. Have you been sick with the novel coronavirus / COVID-19?

O Yes, confirmed
O Yes, but not yet confirmed
O No
O Don't know

12. How likely are you to get the COVID-19 vaccine when it becomes available?

O Already received the COVID-19 vaccine
O Very likely
O Somewhat likely
O Not at all likely

13. Have you received the COVID-19 vaccine?

O Yes, I received the first dose
O Yes, I received the first dose and the second dose
O No, neither dose
O No, don't trust in the COVID-19 vaccination

14. Have you been tested for the COVID-19 virus in the last year?

O Yes
O No
O Don't know

15. Are you aware of the novel coronavirus/ COVID-19 pandemic?

O Yes
O No
O Don't know

16. How would you rate your knowledge level on novel coronavirus/ COVID-19?

O Very poor
O Poor
O Average
O Good
O Very good

17. Please select the answer depending on how much you agree with the statement below;

- If a vaccine for COVID-19 becomes available and is recommended for me, I would get it

O Strongly Disagree
O Disagree
O Neither agree nor disagree
O Agree
O Strongly agree
O Don't know

Appendix B

الإستبانة – النسخة العربية

التجمع الصحي بالقصيم

"موقف ووعي المواطنين حيال التطعيم من فيروس كورونا كوفيد-19 بمنطقة القصيم"

عزيزي المشارك / المشاركة
يمثل هذا الاستبيان دراسة وعي المواطنين بمنطقة القصيم حيال كورونا المستجد كوفيد-19 , أرجو التكرم والإجابة على الأسئلة بآرائكم القيمة من خلال إختيار الإجابة التي ترونها ملائمة .
يرجى العلم أن جميع الأسئلة المطروحة ضمن هذا الاستبيان لأغراض البحث العلمي وأن إجاباتكم ستكون محاطة بالسرية الكاملة. ويستغرق 5 دقائق لإستكماله
شكرا لتعاونكم وحسن استجابتكم....

الباحث / عبدالعزيز عبدالله السالم

- المدينة التي تقيم بها؟
  (   ) بريدة
  (   ) عنيزة
  (   ) الرس
  (   ) البدائع
  (   ) المذنب
  (   ) رياض الخبراء
  (   ) أخرى

- الجنس
  (   ) ذكر
  (   ) أنثى

- العمر
  (   ) 18 – 24 سنة
  (   ) 25 – 34 سنة

( ) 35 – 44 سنة
( ) 45 – 54 سنة
( ) 55 سنة أو اكثر

- الحالة الإجتماعية
( ) أعزب
( ) متزوج
( ) أخرى

- المستوى التعليمي
( ) أقل من الثانوي
( ) ثانوي
( ) دبلوم بعد الثانوي
( ) جامعي
( ) دراسات عليا

- عدد أفراد العائلة التي تقيم معهم
( ) 1 – 3 أشخاص
( ) 4- 6 أشخاص
( ) 7 – 9 أشخاص
( ) 10 أشخاص أو أكثر

- ماهي حالتك الوظيفية حالياً؟
( ) موظف
( ) غير موظف
( ) متقاعد

- هل تعمل بالمجال الصحي ؟ كطبيب أو ممرض أو إداري أو أحد الخاضعين للوظائف الصحية ؟
( ) نعم
( ) لا

- هل لديك أمراض مزمنة؟
( ) نعم
( ) لا

- في العام الماضي ، هل قمت بالتطعيم ضد الفلونزا؟
( ) نعم
( ) لا
( ) لا أعلم

- هل أصبت سابقاً بمرض كورونا المستجد – كوفيد -19؟
( ) نعم ، مؤكد
( ) نعم ، ولكن لم يتأكد بعد
( ) لا
( ) لا أعلم

- مامدى إحتمالية حصولك على لقاح كورونا – كوفيد -19 عندما يصبح متاحاً؟
( ) تلقيت لقاح كوفيد -19 بالفعل
( ) من المحتمل جداً
( ) محتمل إلى حد ما
( ) غير محتمل على الإطلاق

- هل أخذت لقاح كوفيد – 19 ؟
( ) نعم ، أخذت الجرعة الأولى
( ) نعم اخذت الجرعة الأولى والثانية

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( ) لا ، لم احصل على أي جرعة
( ) لا ، لا اثق بلقاح كورونا كوفيد-19

- هل سبق واجريت فحص كوفيد -19 خلال العام الماضي؟
( ) نعم
( ) لا
( ) لا أعلم

- هل لديك إلمام ووعي بوباء فيروس كورونا كوفيد – 19؟
( ) نعم
( ) لا
( ) لا أعلم

- كيف تقيّم معرفتك بوباء فيروس كورونا كوفيد – 19؟
( ) ضعيف جداً
( ) ضعيف
( ) متوسط
( ) جيد
( ) جيد جداً

- الرجاء اختيار الجواب الذي يتوافق مع رأيك
((إذا توفر لقاح كورونا كوفيد-19 وتم توصيتي بأخذه ، فسوف أحصل عليه))
( ) غير موافق بشدة
( ) غير موافق
( ) لا اوافق ولا ارفض
( ) موافق
( ) موافق بشدة
( ) لا أعلم