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Knowledge, Attitude and Practice toward COVID-19 among the Population attending primary healthcare centers in Makkah Al-Mukarramah Saudi Arabia 2022

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Abstract

Background: Since the World Health Organization (WHO) declared coronavirus disease 2019 (COVID-19) as a pandemic, it has become a major challenging public health problem worldwide. This pandemic has affected all aspects of Population life in almost all nations and among all socioeconomic groups. Population of all types are facing an unprecedented crisis with the rapid spread of COVID-19 and severity of the disease in many infected individuals. As such many healthcare systems have been overwhelmed and HCWs presented with work load . There is a potential shortage of physical resources, such as ventilators and intensive care unit beds, needed to care for surges of critically ill patients, however, additional medical supplies and beds will be of limited help unless there is an adequate medical workforce, as the Middle East respiratory syndrome coronavirus (MERS-CoV) continues to occur in small outbreaks in Saudi Arabia. Aim of the study: To assessment the Knowledge, Attitude and Practice toward COVID-19 among the Population attending primary healthcare centers in Makkah Al-Mukarramah Saudi Arabia 2022.Method: Cross sectional study, was conducted among Saudi Arabia population in primary health care center in Makkah Al-Mukarramah. The questionnaire collected socio-demographic characteristics, assessment of Knowledge, Attitude and Practice toward COVID-19 Our total participants were(200).Results: show the relation of participant to Attitude, knowledge, Practice score towards COVID-19 regarding the Attitude the most of participants high attitude were (78.0) heave a significant relation were P-value <0.001 and X2 187.240, regarding the knowledge the most of participants high knowledge were (61.0%) P-value

<0.001 and X2 70.360, the Practice the most of participants high Practice were (77.0%) a significant relation were P-value <0.001 and X2 174.040.

Conclusion: Study participants from KSA, not adequate knowledge, positive attitude, and acceptable practices towards COVID-19 Knowledge. Electronic and social media should be effectively utilized to spread awareness of COVID-19 among the public, the Population worry levels regarding transmitting for COVID-19 during the early stage of the COVID-19 pandemic, and subsequent awareness campaigns that were conducted were associated with increased knowledge, adherence to protective hygienic practices and reduction of anxiety toward the COVID-19 pandemic.

Keywords*: Knowledge, Attitude, Practice, COVID-19, Saudi, Population, PHC.*

Introduction

The Spread of Coronavirus Disease 2019 (COVID-19) has prompted the lamentable loss of numerous human living, also as the burden of enormous financial and social disturbance across the world [1]. Alongside defensive measures, for example, social separating and isolate, a viable immunization will be the best system for moderating the spread of COVD-19 and advancing positive clinical and financial results [2]

During epidemics and pandemics, a hole in information about the emerging infection can cause tumult and frenzy among general public. Circulating the appropriate data can direct society through such occasions as well as increase epidemic preparedness that might occur in the future. Furthermore, negative attitudes and practices towards new infectious diseases can aggravate epidemics which may eventually result in pandemics.[3] Awareness, attitude and practice have been about signs and Symptoms of the Vaccinate against COVID-19 and correspondence practices of Vaccinate about COVID-19 among Adult Saudi Population concentrated in many previous epidemics, for example, swine influenza [4], Middle East Respiratory Syndrome (MERS) and Dengue fever [5].

Coronavirus disease 2019 (abbreviated "COVID-19") is an emerging respiratory disease caused by a novel coronavirus and was first detected in December 2019 in Wuhan, China[6]. Patients present with prodromal symptoms of fever, myalgia, cough, and sore throat, which can become severe, and they can also flinch with shortness of breath and respiratory failure[7]. COVID-19 differs with different patient groups, with the highest severity being reported among older people and those with comorbidity. Although COVID-19 symptoms are mild, infectivity is higher than SARS-CoV and MERS-CoV[8].

The mental impact of the COVID-19 epidemic on general population , psychiatric patients , workers, patients [9], children , older adults and medical students has been reported.[12] However, little attention has been paid to the psychological wellbeing and fatigue levels among HCWs [13]. To further understand the knowledge, attitudes and intended practices of among the Population attending primary healthcare centers, it is particularly beneficial to obtain their input, especially in an area of the world where other respiratory viral illnesses are either endemic, such as MERS-CoV, or seasonal, such as influenza.[14]

The Spread of Coronavirus Disease 2019 (COVID-19) has prompted the lamentable loss of numerous human living, also as the burden of enormous financial and social disturbance across the world [15]. Alongside defensive measures, for example, social separating and isolate, a viable immunization will be the best system for moderating the spread of COVD-19 and advancing positive clinical and financial results [16]

. The oral cavity has been a locus for the adverse events of an array of vaccines, e.g., diphtheria, tetanus, acellular pertussis, and

polio vaccines [17]. The COVID-19-related oral symptoms were attributed to the high expression of angiotensin-converting enzyme 2 (ACE2) receptors in the tongue's epithelial cells, buccal and gingival mucosa [18]. Thus far, all the available data on COVID-19 vaccine side effects has been published by manufacturer-funded studies which are in compliance with the drug authorities' guidelines and monitored by third-parties [19]. A lack of independent studies on vaccines' safety may adversely impact the vaccine uptake, which has to be accelerated in the next few months in order to escape this viscous circle of the virus and its variants [20]

Literature review:

The world has experienced several epidemics with novel coronaviruses; namely, SARS-CoV-1, which emerged in China in 2003 followed by Middle East respiratory syndrome coronavirus (MERS-CoV) in the Middle East in 2012, and the current Severe Acute Respiratory Syndrome Corona Virus-2 (SARS-CoV-2) pandemic [21]. MERS-CoV continues to be endemic in Saudi Arabia with weekly reported cases. With the ongoing circulation of MERS-CoV and continuing zoonotic spillover with 70% of the cases resulting from hospital outbreak, the emergence of COVID-19 within the same setting will be overwhelming to healthcare facilities and workers [22]. Therefore, it is of great importance to know the impact of such epidemics on HCWs.[23] This is an expected finding since there are established guidelines on the treatment of MERS-CoV and seasonal influenza and lack of comprehensive knowledge and experience with SARS-CoV-2.As the understanding of the epidemiology of SARS-CoV-2 evolved, human-to-human transmission was confirmed with the potential for asymptomatic transmission as well [24].

WHO and MOH have proposed a few practices that can help tallness the mindfulness about practices of manifestations of the spired about COVID-19 at an individual level and Saudi Population, For instance direct instructive classes on the significance of the COVID-19 Knowledge, Attitude and Practice toward COVID-19 [25]constructive information and guidance around building a COVID-19 awareness plan and its benefits this online course gives productive data and also direction around building a COVID-19 immunization plan, clinical outline of immunization, including dosages, adequacy, and need hazard gatherings, legitimate contemplations , the clarification an of the knowledge about COVID-19 an individual level and Population and communication plan, also the availability of a COVID-19 Knowledge has raised many important questions must be clarification.[26]

These involve the closing and suspending of all domestic and foreign airlines, mosque worship, colleges and universities, and the nationwide curfew put on residents. This finding is in line with recent research in China and Saudi Arabia, where most participants were assured that the epidemic was curable, and the governments would effectively be able to control it. However, the participants' lower optimism towards preventing and controlling COVID-19 was due to anxiety and panic during the pandemic[27]

It has been shown that individuals with higher education have increased awareness and a greater cognitive capacity, making it easier to understand the relevant knowledge of COVID-19. Moreover, education is a significant predictor of the participant's knowledge of infectious diseases[28].

Study conducted in Iran reported lower scores on knowledge and noncompliance with wearing masks in public places among Iranian adolescents [29]

In a study that investigated Chinese Population knowledge, attitudes, and practices (KAPs) towardCOVID-19 [25], results affirmed that adolescents are more likely to engage in health risk behaviors.

Yeo, et al., (2020) found that SARS-CoV and MERS-CoV are less common and severe among children. However, it is possible that true numbers of infected cases among children are underestimated or underreported, as children are frequently asymptomatic or have

less severe symptoms, are usually well protected at home and have less exposure to the sources of infection transmission, and are often less tested [30]

Wang, et al. (2021)The severity of symptoms has shown has demonstrated to be more in elderlies, alongside those with basic persistent medical issue because of pneumonia, cytokine storm and multi-organ failure [26]

Webb, et al. (2021) Vaccines are the main public health measure and best methodology to shield the populace from COVID-19, since SARS-CoV-2 is profoundly infectious infection and influences populaces broadly and universally. The opposition for COVID-19 antibody creation and advancement against the spread and cataclysmic impacts of the sickness is continuous [28]. In comparison with the results of a previous survey in the same settings using the same data collection tool, to assess the concern of HCWs about MERS outbreak in Saudi Arabia [31],HCWs reported significantly higher mean concern scores about Covid-19 pandemic. It was interesting that in the previous study in Saudi Arabia , 85% agreed that school and shopping markets need to be closed, while only 19% during the previous MERS outbreak [16]

Rationale

There are several limitations differences in knowledge, attitude and practice scores between different groups, but a small difference should be interpreted with caution, Knowledge, Attitude and Practice toward COVID-19 among the Population in early in the pandemic and not much information was available and thus it corresponded to a variable level of anxiety and stress. alot of limitations, has highlighted the importance of addressing Knowledge, Attitude and Practice toward COVID-19 among the Population and also the stress levels and ensuring providing information from trustable sources, which will all contribute to better compliance with infection control measures and limiting disease spread, Greater educational efforts about Knowledge, Attitude and Practice toward COVID-19 among the should be directed to Population and patient contacts (including the treating team) should be more involved in the process of education about infectious diseases.

Aim of the Study

To assessment the Knowledge, Attitude and Practice toward COVID-19 among the Population attending primary healthcare centers in Makkah Al-Mukarramah Saudi Arabia 2022.

Objectives:

To assessment the Knowledge, Attitude and Practice toward COVID-19 among the Population attending primary healthcare centers in Makkah Al-Mukarramah Saudi Arabia 2022

SUBJECTS AND METHODS

Study design:

This cross-sectional survey has been conducted among Population in the city of Makkah Al-Mukarramah. The study carried for 25 days, from the 1st till the 25 th of February 2022, among Saudi Population attend to the PHC centers in Makkah, participants aged between 18 and 20 years and <60, the study investigators will share the survey link in social media (Twitter, Whats App, Telegram channel) and through emails to their primary contacts

Study setting / study area:

Study participants have been recruited on Makkah Al-mukarramh including PHC centers under supervision of Directorate of Health Affairs of Makkah Al-Mukarramah in Saudi Arabia. The study has been carried out in the city of Makkah Al-Mokarramah, Makkah is the holiest spot on Earth. It is the birthplace of the Prophet Mohammad and the principal place of the pilgrims to perform Umrah and Hajj. The most important cities in Saudi Arabian . It is the holy city for all Muslims, and is located in the western region. It is located in the western area in Kingdom of Saudi Arabia. Contains a population around 2.578 million.

Study population:

The study has been conducted among Population in the PHC centers in the Makkah Al-Mokarramah at Saudi Arabia. Including Al-Ka'akya, Al-Adl, Al-Zahir primary healthcare centers.

Selection criteria:

Inclusion Criteria :

- All Saudi people who are more than 20 years of age. A study participant has been recruited from Makkah Al-Mukarramah.

Exclusion criteria:

- Saudi younger than 18 years
- Participants who did not consent to participate in the study, and/or did not answer the questions of the study.
- Patients with language barriers.
- Saudi younger than 18 years

Study Sample:

The sample size has been calculated by applying Raosoft sample size calculator based on (The margin of error: 5%, Confidence level: 95%, and the response distribution was considered to be 20%) accordingly the Sample size is 200 of adult Saudi Population attending in PHC and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample has been 200. Computer generated simple random sampling technique was used to select the study participants.

Sampling technique:

Systematic random sampling technique is adopted. By using systematic sampling random as dividing the total population by the required sample size; (200)

Data collection methods:

The self-administered questionnaire is designed based on previous studies and frameworks to assess the Knowledge, Attitude and Practice toward COVID-19 among the Population attending primary healthcare centers.

The questionnaire was developed in English and was then translated into Arabic. The questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. The survey is estimated to take 5 min to complete.

To collect the information, a set of questions were constructed and developed.

The questionnaire consisted of two main sections; the first section focuses on

Socio demographic and background information such as age, education level, outcome and gender of the participants.

Knowledge toward COVID-19 among the Population attending primary healthcare centers .

Attitude and Practice toward COVID-19 among the Population attending primary healthcare.

Practice toward COVID-19 among the Population attending primary healthcare centers

Pilot study

Was carried out at the questions were first pre-tested and were revised and finalized after it was pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. This study has been conducted and all suggestions taken into consideration.

Data analysis

The Statistical Package for Social Sciences (SPSS) software version 24.0 has been used for data entry and analysis. Descriptive statistics (e.g., number, percentage) and analytic statistics using test for the association and the difference between two categorical variables were applied. A p-value ≤ 0.05 has been considered statistically significant.

Ethical consideration:

- Permission from family medicine program was obtained.
- Permission from the regional Research and Ethical Committee was be given to conduct our study.
- All the subjects has been participate voluntarily in the study.
- Privacy of information and confidentiality has been maintained.
- Full explanation about the study and its purpose was carried out to obtain their participation.

Budget: Self-funded

Result

Table 1 Distribution of characteristics of participated in this study (n=200)

	N	%
Age		
20-40	80	40.00
40-60	56	28.00
More than 60	64	32.00
Gender		
Female	60	30.00
Male	140	70.00
Education		
Illiterate	16	8.00
Primary	22	11.00
Preparatory	38	19.00
Secondary	40	20.00
University	84	42.00
Occupation		
Yes	130	65.00
No	70	35.00
Income		
Less than 3000SR	52	26.00
3000-6000SR	44	22.00
6000-9000SR	38	19.00
More than 9000SR	66	33.00

Table 1 shows regarding the age majority of the study groups were in the age range of (20 - 40%) years were (40.0%) , regarding the gender many of the respondents were male (70.0 %) while female were (30.0%). Regarding the education status, the majority of the respondents had University degree were (42.0%), while Occupation the most of the participants answer Yes were (65.0%). Regarding the income The majority of them had an income from More than 9000SR were (33.0%) .

Table (2) Distribution of the Satisfaction attitude of the participant towards COVID-19 among the Population in primary health care center (No=200)

		Satisfaction attitude of the Public towards COVID-19					**% Of agreement**	**Chi-square**	
		Strongly agree	**Agree**	**Neutral**	**Disagree**	**Strongly disagree**		**X^2**	**P-value**
1- It is important to keep distance from others to avoid the spread of COVID - 19	**N**	92	64	22	14	8	81.8	132.600	0.000
	%	46	32	11	7	4			
2-Hand washing is an effective measure against COVID-19.	**N**	152	32	4	10	2	92.2	406.200	0.000
	%	76	16	2	5	1			
3-To protect myself from COVID-19 exposure, I should stay home or receive medical care while I am sick.	**N**	164	22	4	6	4	93.6	486.200	0.000
	%	82	11	2	3	2			

4-COVID-19 will eventually be controlled successfully	**N**	158	26	4	4	8	92.2	443.400	0.000
	%	79	13	2	2	4			
5-Compliance with the precautionary measures of the Ministry of Health will prevent the spread of COVID19.	**N**	92	70	18	8	12	82.2	147.400	0.000
	%	46	35	9	4	6			

Table (2) shows the satisfaction level attitude of the Public towards COVID-19 among the Public. Our study regarding It is important to keep distance from others to avoid the spread of COVID-19 the majority of our participant Strongly agree were (46.0%) while Strongly disagree were(4.0%) while % Of agreement(81.8%) were significantly associated were P< 0.001 and X2 (132.600). Regarding the Hand washing is an effective measure against COVID-19 majority of our participant Strongly agree were (79.0%) while Strongly disagree were(1.0%) were a significantly associated were P< 0.001 and X2 (406.200), while % % Of agreement were(92.2%), regarding The To protect myself from COVID-19 exposure, I should stay home or receive medical care while I am sick majority of our participant Strongly agree were (82.0%) while Strongly disagree were(2.0%) were a significantly associated were P< 0.001 and X2 (486.200), while % of satisfaction were(93.6%) . Regarding the COVID-19 will eventually be controlled successfully majority of our participant Strongly agree were (79.0%) while Strongly disagree were(4.0%) were a significantly associated were P< 0.001 and X2 (443.400), while % of satisfaction were(92.2%). Regarding the Compliance with the precautionary measures of the Ministry of Health will prevent the spread of COVID19 majority of our participant Strongly agree were (46.0%) while Strongly disagree were(6.0%) were a significantly associated were P< 0.001 and X2 (147.400), while % of satisfaction were(82.2%).

Table (3): Distribution of the participant knowledge towards COVID-19 in primary health care center (No=200).

Items	**knowledge regarding COVID - 19**				**Chi-square**	
	Correct		**Incorrect**			
	N	**%**	**N**	**%**	**X^2**	**P-value**
1- COVID-19 spreads from individual-to-individual within close distance of each other	190	95%	10	5%	162.000	<0.001*
2- COVID-19 spread via respiratory droplets, like coughing and sneezing	186	93%	14	7%	147.920	<0.001*
3- COVID-19 can be contracted by touching a contaminated surface, followed by touching one's mouth, nose, or eyes.	164	82%	36	18%	81.920	<0.001*
4-Close contact or ingesting wild animals causes COVID -19.	166	83%	34	17%	87.120	<0.001*
5-People infected with COVID-19 can't transmit the virus to others while a fever is not present.	176	88%	24	12%	115.520	<0.001*
6-The main symptoms of COVID -19 are fatigue, fever, dry cough, shortness of breath, and myalgia	142	71%	58	29%	35.280	<0.001*
7-Antibiotics are an effective treatment for COVID -19.	130	65%	70	35%	18.000	<0.001*
8- People with serious chronic illnesses are at increased risk of developing more serious complications from COVID -19	146	73%	54	27%	42.320	<0.001*
9-Children appear to be at higher risk for COVID -	138	69%	62	31%	28.880	<0.001*

19 than adults.						
10-It is essential for children to take measures to avoid COVID -19 transmissions.	186	93%	14	7%	147.920	<0.001*
11-People should avoid touching their eyes, nose, and mouth with unwashed hands.	164	82%	36	18%	81.920	<0.001*
12-People should put on a mask if they are infected with the virus or caring for somebody with suspected COVID-19 infection	190	95%	10	5%	162.000	<0.001*
13-Isolation and treatment of people infected with the COVID-19 are effective methods to decrease infection	176	88%	24	12%	115.520	<0.001*
14-People in contact with someone infected with COVID -19 should be immediately quarantined, in an appropriate location, for an observational period of 14 days	160	80%	40	20%	72.000	<0.001*
15- To prevent transmission of COVID-19, people must avoid going to crowded places and avoid taking public transport.	184	92%	16	8%	141.120	<0.001*

Our study show regarding all items COVID-19 spreads from individual-to-individual within close distance of each other. COVID-19 spread via respiratory droplets, like coughing and sneezing. COVID-19 can be contracted by touching a contaminated surface, followed by touching one's mouth, nose, or eyes. Close contact or ingesting wild animals causes COVID -19. People infected with COVID-19 can't transmit the virus to others while a fever is not present. The main symptoms of COVID -19 are fatigue, fever, dry cough, shortness of breath, and myalgia. Antibiotics are an effective treatment for COVID -19. People with serious chronic illnesses are at increased risk of developing more serious complications from COVID -19. Children appear to be at higher risk for COVID -19 than adults. It is essential for children to take measures to avoid COVID -19 transmissions. People should avoid touching their eyes, nose, and mouth with unwashed hands. People should put on a mask if they are infected with the virus or caring for somebody with suspected COVID-19 infection. Isolation and treatment of people infected with the COVID-19 are effective methods to decrease infection. People in contact with someone infected with COVID -19 should be immediately quarantined, in an appropriate location, for an observational period of 14 days. To prevent transmission of COVID-19, people must avoid going to crowded places and avoid taking public transport.

The majority of our participant in Correct answer respectively were (95%, 93%, 82%, 83%, 88%, 71%, 65%, 73%, 69%, 93%, 82%, 95%, 88%, 80%, 92%)

While Incorrect respectively were (5%, 7%, 18%, 17%, 12%, 29%, 35% 27%, 31%, 7%, 18%, 5%, 12%, 20%, 8%), also all items were a significantly associated were P< 0.001 and respectively X2 (162.000, 147.920, 81.920, 87.120, 115.520, 35.280, 18.000, 42.320, 28.880, 147.920, 81.920, 162.000, 115.520, 72.000,141.120)

Table (4): Distribution of the participant to Practice towards COVID-19 in primary health care center (No=200)

	Practice for preventing Covid-19 transmission				**Chi-square**	
	Yes		**No**		**X^2**	**P-value**
	N	**%**	**N**	**%**		
Have you recently participated in a social event with a large number of people?	32	16%	168	84%	92.480	0.000
Have you been to a crowded place recently?	42	21%	158	79%	67.280	0.000
Have you avoided cultural	132	66%	68	34%	20.480	0.000

behaviours such as shaking hands recently?						
Are you practicing social distancing?	178	89%	22	11%	121.680	0.000
Recently, are you often wash your hands with soap and water for at least 40 seconds, especially after going to public places, or after – blowing your nose, coughing, or sneezing?	186	93%	14	7%	147.920	0.000

Table (4) shows the participant to Practice towards COVID-19. Our study regarding Have you recently participated in a social event with a large number of people the majority of our participant answer No were (84.0%) while Yes were(16.0%) while a significantly associated were P< 0.001 and X2 (92.480), regarding Have you been to a crowded place recently the majority of our participant answer No were (79.0%) while Yes were(21.0%) while a significantly associated were P< 0.001 and X2 (67.280), regarding Have you avoided cultural behaviours such as shaking hands recently the majority of our participant answer Yes were (66.0%) while No were(34.0%) while a significantly associated were P< 0.001 and X2 (20.480), regarding Are you practicing social distancing the majority of our participant answer Yes were (89.0%) while No were(11.0%) while a significantly associated were P< 0.001 and X2 (121.680), regarding Recently, are you often wash your hands with soap and water for at least 40 seconds, especially after going to public places, or after –blowing your nose, coughing, or sneezing the majority of our participant answer Yes were (93.0%) while No were(7.0%) while a significantly associated were P< 0.001 and X2 (147.920).

Table 5 Distribution of the relation of participant to Attitude, knowledge, Practice score towards COVID-19

		Weak	**Average**	**High**	**Chi-square**	
					X^2	**P-value**
Attitude	**N**	6	38	156	187.240	<0.001*
	%	3	19	78		
knowledge	**N**	32	46	122	70.360	<0.001*
	%	16	23	61		
Practice	**N**	14	32	154	174.040	<0.001*
	%	7	16	77		

Table 5 show distribution of the relation of participant to Attitude, knowledge, Practice score towards COVID-19 regarding the Attitude the most of participants high attitude were (78.0%) followed by average were (19.0%) while heave a significant relation were P-value <0.001 and X2 187.240, while regarding the knowledge the most of participants high knowledge were (61.0%) followed by average were (23.0%) while heave a significant relation were P-value <0.001 and X2 70.360, while regarding the Practice the most of participants high Practice were (77.0%) followed by average were (16.0%) while heave a significant relation were P-value <0.001 and X2 174.040.

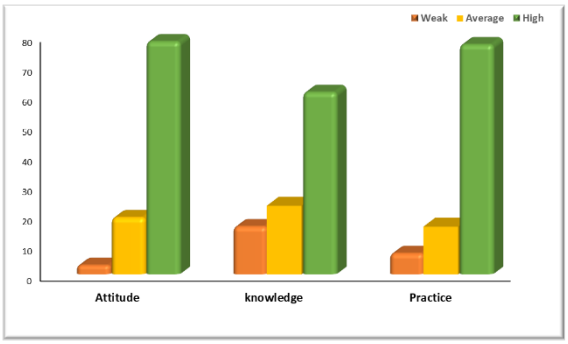

Figure (1) Distribution of the relation of participant to Attitude, knowledge, Practice score towards COVID-19

Table 6 Distribution of the relation of responses of participant knowledge, attitude and practice toward COVID-19

		Attitude	knowledge
knowledge	r	0.897	
	P-value	<0.001*	
Practice	r	0.901	0.88
	P-value	<0.001*	<0.001*

Table 6 show regarding relation of responses of Public to Attitude and knowledge with the knowledge and practice during COVID-19 regarding the knowledge and attitude the a significantly associated while P-value <0.001 and r=0.897 while regarding practice and knowledge show a significantly associated while P-value <0.001 and r=0.88 but regarding the practice and attitude show a significantly associated while P-value <0.001 and r=0.901

Discussion

The purpose of this study was to assess Knowledge, Attitude and Practice toward COVID-19 among the Population attending primary healthcare centers in Makkah Al-Mukarramah Saudi Arabia 2022.

Socioeconomic characteristics of the population to obtain information that could be used awareness campaign and to determine whether people's knowledge differed based on particular characteristics of the target population.

shows regarding the age majority of the study groups were in the age range of (20 - 40%) years were (40.0%) , regarding the gender many of the respondents were male (70.0 %) while female were (30.0%). Regarding the education status, the majority of the respondents had University degree were (42.0%), while Occupation the most of the participants answer Yes were (65.0%). Regarding the income The majority of them had an income from More than 9000SR were (33.0%) .(See table 1)

The world has experienced several epidemics with novel coronaviruses; namely, SARS-CoV-1 which emerged in China in 2003 followed by Middle East respiratory syndrome coronavirus (MERS-CoV) in the Middle East in 2012, and the current Severe Acute Respiratory Syndrome Corona Virus-2(SARS-CoV-2) pandemic [31]. MERS-CoV continues to be endemic in Saudi Arabia with weekly reported cases. With the ongoing circulation of MERS-CoV and

continuing zoonotic spillover with 70% of the cases resulting from hospital outbreak, the emergence of COVID-19 within the same setting will be overwhelming to healthcare facilities and Population [32]. Therefore, it is of great importance to know the impact of such epidemics on Population. This is an expected finding since there are established guidelines on the treatment of MERS-CoV and seasonal influenza and lack of comprehensive knowledge and experience with SARS-CoV-2.

As the understanding of the epidemiology of SARS-CoV-2 evolved, human-to-human transmission was confirmed with the potential for asymptomatic transmission as well [30]. SARS-CoV-2 has also demonstrated a very rapid transmission rate with a reported R0 = 2.5; i.e. each patient can spread the virus to two other patients [20]. Hospital transmission was also reported and was estimated to account for 41.3% of cases [19]. This highlights the importance of strict infection control measures and continuous HCW education and competency, not only to decrease transmission but to limit HCW anxiety, which will result in better compliance, performance and patient care. These HCWs reported that their main concern was the risk of transmitting the infection to their families (2.71/5) or acquiring it themselves (2.57/5) [21]

The current study showed that HCWs who had previous experience with MERS had higher knowledge scores and more adherence to protective hygienic practices. These results could be explained by the fact that previous hospital educational campaigns and managing previous MERS-CoV cases may have enhanced their knowledge and intentions to be in compliance with infection control practices [23]. Another speculation is that the occurrence of MERS in Saudi Arabia is ongoing and there is more awareness about it among HCWs [24]. Similarly, HCWs who were more adherent to receiving the annual influenza vaccine had higher knowledge mean score and higher compliance with hygienic practices. The association between the effect of knowledge, among other multimodal interventions, and compliance with influenza vaccination, has been demonstrated in previous studies, including those conducted in Saudi Arabia [28]. Influenza vaccine utilization may indicate general awareness and initiative for self-healthcare.

During the COVID-19 outbreak, a similar the awareness about the risk perceptions attitude about COVID-19 among Population Saudi Population . Was detected in Riyadh and Al-Jouf [20] . A similar level of awareness was detected among health care providers in UAE , Vietnam and Uganda [21], also my study is similar to another study the COVID-19 can cause side effects, most of which are and go away within a few week on their own. [19]

As shown in the results of clinical trials, more serious or long-lasting side effects are possible. Vaccines are continually monitored to detect adverse events.[32] Reported side effects of COVID-19 vaccines have mostly been mild to moderate and have lasted no longer than few days. Typical side effects include pain at the injection site, fever, fatigue, headache, muscle pain, chills and diarrhea. The chances of any of these side effects occurring after vaccination differ according to the specific vaccine. COVID-19 vaccines protect against the SARS-CoV-2 virus only, so it’s still important to keep yourself healthy and well.[30]

Conclusion

COVID-19 disease was announced as a pandemic on the 12th of March 2020. The causative of this disease is highly contagious, therefore, raising awareness is a major of perceptions attitude about signs and symptoms of the Vaccinate against COVID-19 and practices of Vaccinate about COVID-19 among Adult Saudi Population is very importen aspect to curb the transmission of the COVID-19. The results of this study identified areas of misconceptions symptoms of the Vaccinate against and specific groups to be targeted for educational programs regarding Vaccinate against COVID-19. Several aspects were less knowledgeable among respondents, including the symptoms of the Vaccinate againstvirus mode of transmission, symptoms, incubation period and re-infection and the vulnerable

people. It is therefore suggested that a well-planned and structured educational program should be undertaken to improve the level of awareness and contribute to better attitude and practice. In this current pandemic, people should follow the ministry of health instructions and avoid close contact with others, especially immune compromised individuals.

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