Awareness of the General population about Influenza Vaccine in Tabuk, Saudi Arabia

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Awareness, General population, Influenza Vaccine, Tabuk, Saudi Arabia.

ABSTRACT
Objectives: Increasing national influenza vaccination rates continues to be a challenge for Saudi Arabia. Therefore, the purpose of this study was to explore the Saudi public perceptions toward seasonal influenza vaccination and their association with the rate of vaccination. Methods: This is a descriptive cross-sectional study. The study includes the general population in Tabuk, Northern Saudi Arabia. The study includes Saudi and none Saudi who speaks Arabic or English, from any age group (18-60 years), male or female, any level of education (from primary to university or more) and low, moderate or high socioeconomic level. Results: Regarding to gender, the study showed that the largest percentage of the study members are male with a percentage of (63.3 %), while there is a percentage of (36.6%) females. According to" Received influenza vaccine" there are (63.3%) of the respondents chose (Yes) and (36.6%) of the respondents chose (No). according to" Influenza vaccination is effective in preventing influenza infection" there are (53.3%) of the respondents chose (Yes), (26.66%) of the respondents chose (No) and (20%) chose (Don't Know). Conclusion: The findings of this study suggest that the rate of seasonal influenza vaccination is moderate among the Saudi population, which necessitates the launching of public awareness campaigns about the importance of the seasonal influenza vaccine.

1. Introduction

Most people refer to influenza as "the flu." It is an extremely contagious respiratory illness caused by the influenza virus. The flu can cause serious side effects, such as pneumonia, and even death, particularly in susceptible groups like the elderly and people with underlying medical conditions. Influenza vaccination is the most effective way to prevent the flu and its complications, according to the World Health Organization (WHO). Furthermore, mass vaccination campaigns are essential for halting the flu's spread and lessening its overall negative effects on public health (1).

A high prevalence of medical conditions that raise the risk of serious influenza-related complications is present in Saudi Arabia (SA), a country with a rapidly expanding population. All patients with asthma, diabetes, chronic obstructive pulmonary disease, neurological disorders, immune deficiencies, and long-term aspirin therapy should receive the seasonal influenza vaccination each year, according to the Saudi Ministry of Health (MOH) (2).

Additionally, it advises those who are obese, pregnant women, children between the ages of six months and five years, adults over the age of fifty, and healthcare professionals all to get vaccinated against influenza each year. Additionally, the MOH strongly advises pilgrims to receive a seasonal flu vaccination prior to performing the Hajj. By providing free flu shots, the MOH shows that it values the health and wellbeing of its citizens and residents (3). Anyone can get the vaccine for free, Saudi citizens and foreigners alike, regardless of insurance coverage. Influenza vaccination rates have historically been low in South Africa, even though the shots are readily available. The public health community is concerned about this, and research is required to determine what influences the population's inclination to become more vaccinated (4).

Low rates of seasonal influenza vaccination can make matters worse and contribute to the local and international spread of infectious diseases like the seasonal influenza. This is especially concerning when it comes to Saudi Arabia, where Muslims travel from all over the world to fulfill their religious obligations of performing the annual Hajj, which is a major pilgrimage, and the daily Umrah, a minor pilgrimage (5).

Exposure to a wide range of individuals from different socioeconomic backgrounds, countries at different stages of development, and high rates of influenza positivity all contribute to an increased risk of infection, and ultimately, domestic and international transmission of the disease. Furthermore, Hashem et al. highlighted the risks associated with these events by pointing out that they serve as a breeding ground for newly discovered or extremely dangerous virus strains and/or resistance (5).

Additionally, according to a comprehensive assessment by Benkouiten et al., the prevalence of influenza-like diseases during the Saudi Arabian holy pilgrimage ranged from 8 to 78.2%. Furthermore, it was thought that the seasonal influenza vaccination will reduce the infection rate among domestic pilgrims who received the shot from 10% to 0% and among vaccinated travelers from the United Kingdom from 14% to 7% (6).

Locally, since 2017, the Ministry of Health has overseen the Influenza Surveillance in Saudi Arabia (ISSA), which is tasked with planning, organizing, evaluating, and sharing information at the public and governmental levels in order to prevent and control the disease's effects. Furthermore, guidelines for the prevention and management of seasonal influenza in healthcare settings have been published by the Ministry of Health. The public and medical professionals should get the influenza vaccine annually, according to the Ministry of Health's recommendations. Moreover, all Saudi nationals are eligible for the vaccination at no cost (6).

2. Literature review

Influenza causes significant financial losses due to missed work and hospital stays. This acute illness affects the upper respiratory tract and causes inflammation as the body tries to get immune cells to the infection site as quickly as possible. In response, the immune system releases chemokines and cytokines (interferon), resulting in symptoms including fever, coryza, and bodily pain. The most prevalent form of influenza in humans, influenza A, is a genetically labile virus whose mutation rate is more than 300 times quicker than that of influenza B when compared to other bacteria (7, 11).

Multiple influenza RNA virus strains are the cause of influenza (flu), a respiratory illness. Three primary influenza virus types—A, B, and C—are distinguished by their protein composition. Given that it primarily infects birds and mammals, including humans, influenza type A is the most prevalent strain. Subtypes of the influenza virus that have caused epidemics and pandemics, such H5N1 and H1N1, have been caused by constant changes in the genetic structure of the virus throughout history. Because influenza has a high rate of transmission and is a severe infection, there is still a chance of additional epidemics and pandemics (7).

The specific preventive measure against seasonal influenza is vaccination, which can also be used to stop the infection from spreading. In 1945, the seasonal influenza vaccine (SIV) received its first licensing. The vaccination has successfully decreased the possible health and financial burden and is advised for high-risk and older populations. It is predicted that when an adequate vaccination coverage rate is achieved, annual influenza-related costs of about USD 220 million can be averted. Furthermore, those who received the vaccination missed far fewer workdays due to absenteeism caused by the virus than those who did not. Nonetheless, there is still a significant barrier to having a more beneficial effect on the economy and public health because to the low uptake rates of SIV (8).

In reaction to the notable rise in influenza cases and influenza-like illnesses (ILIs), the Saudi Arabian Ministry of Health (MOH) has lately advised the public to attend primary healthcare facilities (PHCs) to receive the SIV. According to the Saudi Arabian Ministry of Health, there was a significant rise in influenza cases and ILIs throughout the flu seasons in 2022 when compared to the same period in previous years, suggesting a possible strain on the Kingdom's healthcare system. The proportion of positive influenza cases, the number of ILIs, and the number of severe acute respiratory infections (SARIs) have increased from 3.75%, 45, and 82 in 2021 to 25.11%, 344, and 303 in the equivalent period of 2022, respectively, according to the WHO influenza surveillance data (9).

Numerous investigations have evaluated the elements that influence an individual's decision to vaccinate against influenza, including age, gender, income, education, and health. Research has examined how social determinants—such as cultural views, health literacy, and access to healthcare—play a part. Nevertheless, the outcomes of these investigations have been inconclusive, and several studies have been conducted in nations with dissimilar cultural and healthcare systems to South Africa (10).

In addition, the Saudi Ministry of Health requires all medical professionals to receive an annual influenza vaccination. Nonetheless, the low vaccination rates now exist are a result of the fact that many people make

vaccination decisions in accordance with cultural and religious convictions. A person's decision to get the influenza vaccine is influenced by a number of factors, which Sagor and AIAteeq classify as knowledge, attitudes, and practices (KAPs) pertaining to influenza and the influenza vaccine. The KAPs about flu and its vaccinations in Saudi Arabia's general public, healthcare workers (HCWs), and parents are examined in the paragraphs that follow (11).

knowledge regarding vaccine immunization

Responses to and choices on influenza vaccination were significantly influenced by historical information. others who were already aware of the influenza vaccine had a higher chance of getting it than others who knew nothing at all. In addition, more people got immunized when they knew that hospitals were providing free vaccinations. The study also showed that when people were informed and familiar with pertinent information beforehand, they were more likely to comply with health recommendations (12).

According to a prior study, individuals who had received vaccinations had greater levels of knowledge than those who had not. Additionally, those who had previously interacted with the vaccine showed greater awareness and a deeper comprehension of how it impacted their immune system; this was particularly evident in comparison to those who had never received the vaccination, mainly because of unfavorable beliefs that the vaccine compromises immunity. The fact that the majority of participants were unaware that the government provided free vaccinations at numerous health clinics across the nation was another issue pertaining to their level of awareness (12).

Given that the Saudi Ministry of Health requires all healthcare workers to receive the flu vaccine annually, the higher immunization rate within this group was predicted. The similar strategy is used by several nations to limit nosocomial influenza infections. The reasons that have been generally cited for the flu vaccine reluctance and hesitancy provide some insight into the obstacles. These elements ought to be taken into account in a plan for improving the immunization program. However, as many of the non-vaccinated people in the current study answered "no specific reason" or "I do not want," a second study devoted to examining all potential causes is necessary in order to fully investigate these issues (13).

The explanations provided by the respondents also revealed a number of false beliefs that need to be cleared up in public health messaging. The ineffectiveness of the vaccine, the idea that being healthy negates the need for immunization, interactions with the COVID-19 vaccine, the notion that pregnant women should not receive the vaccine, and the notion that the vaccine causes the flu are the most prominent of these myths. Previous research conducted in Saudi Arabia have documented similar fallacies, namely regarding the ineffectiveness of vaccines and the mild nature of influenza (13).

In order to gauge the uptake of the influenza vaccine and to evaluate persons visiting primary healthcare centers in Dammam, Saudi Arabia, a cross-sectional study was conducted to evaluate their knowledge, attitudes, and practices regarding the vaccine. Of the participants, 57% had good understanding of the influenza vaccine and 50.4% had gotten it at least once. The participants felt that the best source of knowledge was healthcare professionals (17).

Factors contributing to flu vaccine acceptability

With differing degrees of success, several research evaluated the variables influencing the acceptability of the flu vaccine. Logistic regression analysis of our respondents' perceptions of the significance of the flu vaccine showed that the following independent predictors accounted for it: a strong understanding of the vaccine, a belief that influenza poses a threat, prior exposure to the vaccine, and the conviction that vaccination lessens susceptibility to the illness (14).

The majority of these variables were also linked to the chance of receiving the vaccine in 2021 and 2022; these independent predictors included being a man, working in the medical field, thinking that influenza is dangerous, believing that the flu vaccine is important, having received the shot previously, and thinking that the vaccine could lessen susceptibility. These results emphasize even more the connection between persuading the intended audience of the vaccine's benefits and the significance of vaccination uptake. It is interesting to see that having side effects was linked to vaccine acceptability, but these are more of a consequence of receiving the shot than a motivator (15).

Higher educated people are more likely to be aware of the value of vaccinations and possess reliable vaccination information. In univariate analysis, our findings demonstrated that a higher level of education positively

impacted both vaccination uptake and perceptions of the vaccine's relevance. When the multivariate analysis was performed after adjusting for other variables, no significant contribution was found. This could be explained by the variable "perceiving the relevance of the vaccine" having an adjustment impact that includes education along with the variables "excellent knowledge" and "hearing about the flu vaccine before." (15).

The gender of the participants had no discernible impact on their perception of the vaccine's significance; nevertheless, univariate and multivariate analyses revealed a strong correlation between male gender and immunization. Conversely, prior research conducted in the Kingdom of Saudi Arabia revealed that, in both univariate and multivariate analysis, vaccination rates were considerably greater in females than in males (15).

Since flu shots are free in Saudi Arabia, one's ability to pay should not be a deterrent to getting vaccinated. Since the socioeconomic position is likely influenced by other factors, controlling for them results in a lack of meaningful influence from money. After controlling for variables, a recent Italian survey revealed that a lower economic position was associated with a reduced likelihood of receiving an influenza vaccination (16).

Healthcare professionals should inform their patients about the flu vaccine in order to combat vaccine reluctance. Additionally, the ministry of health should release targeted health messages that dispel common misconceptions about the vaccine and allay public fears of side effects.

Study objective

This study aims to study the awareness of influenza vaccine among the general population in Tabuk, Northern Saudi Arabia.

3. Methodology

Study design:

In the Kingdom of Saudi Arabia, a descriptive analytic cross-sectional research design was conducted with the purpose of detecting the awareness of influenza vaccine among the general population in Tabuk, Northern Saudi Arabia. This design is a method that is both systematic and organized, and it is used to gather data from a sample of individuals or entities that are part of a larger population. The major objective of this design is to provide a comprehensive and accurate description of the characteristics, behaviors, perspectives, or attitudes that are present within the target group.

Study population and setting:

The study will include the general population in Tabuk, Northern Saudi Arabia.

Inclusion Criteria:

- Saudi and none Saudi who speaks Arabic or English, from any age group (18-60 years), male or female, any level of education (from primary to University or more) and low, moderate or high socioeconomic level.
- Willing to participate in the study.

Exclusion Criteria:

- Individuals with medical background.
- None Arabic or English speakers.
- Unwilling to participate in the study.

Sample size:

the Rao soft program was used to compute a sample size of 1200 participant based on a 50% anticipated response distribution, a 5% acceptable error, and a 95% confidence interval.

Sampling technique:

Systematic random sampling will be employed in our study. In Tabuk City of Saudi Arabia, we will randomly chose five PHCCs from the city, then we will include every 5th attendant of the PHCC (any adult attendant aged 18-60 years, not only the patients).

Study variables:

The dependent variables are

1. The perception of the individuals about the influenza vaccine.
1. Demographic characteristics: Age, gender, Marital status
2. Educational characteristics: Education level, Occupation
3. Vaccine related: Previous influenza vaccination status

The independent variable:

The awareness of influenza vaccine among the general population in Tabuk, Northern Saudi Arabia.

Data Collection tool:

It will deal with Participants demographic such like age, gender, marital status and educational level. Also issues concerning the awareness of influenza vaccine among the general population in Tabuk, Northern Saudi Arabia. The questionnaire will be adopted from validated questionnaire taken from previous study with similar aims. However, the questionnaire will be edited to fit our study population. The questionnaire has 3 sections, demographic variables, and influenza vaccine awareness. Data will be collected by personal interview of the participants. Trained data collectors will be recruited to assist in questionnaire filling to the Saudi population in selected primary care centers of Tabuk City, Saudi Arabia. The data collection period will be from 1st July to 31st December 2023.

Content validity of the tool: Four experts in the field of statistics and infection control have revised the edited questionnaire for content validity. Moreover, a pilot study was conducted to check the clarity of the questionnaire and test its reliability.

Ethical consideration: All study participated have voluntarily participated in the research and informed consent will be taken from them. Participants have the right to withdraw from the study at any time without undesirable consequence and guarantee full justice to all of them. Confidential information will be reserved. Access to the information will be only granted to researchers for study purposes only. Safeguard information will be applied. IRB approval will be obtained from IRB committee in MOH, Tabuk, Northern Saudi Arabia.

4. Results

Validity and Reliability Tests:

Internal Consistency Reliability Calculation:

After determining the legitimacy of the internal consistency between the statements of each objective and the overall score for the corresponding axis, Pearson's Coefficient Correlation was computed in order to validate the validity of the statement. Following the construction of the research instrument and the establishment of its apparent validity by the presentation of the instrument to a panel of arbitrators who were both knowledgeable and experienced in the area, this step was taken.

Reliability of the study tool:

As for testing the reliability of the questionnaire, we utilized Cronbach's alpha coefficient, and the accompanying table illustrates the reliability axis of the research instrument as follows:

Table (1): Cronbach's alpha coefficient reliability coefficient for the total score of the questionnaire

	No. of statements	Cronbach's alpha
comprehensive quality standards questionnaire	19	0.856

The table showed that the Cronbach's alpha reliability coefficient for the total score of the questionnaire was (0.856), which is a good reliability coefficient suitable for the study.

Table (2): Socio demographic characteristics of the studied participants

Sociodemographic variables	Cases (n=1200)	
	No.	%
Age category (years)		
29-18	450	37.5%
39-30	370	30.8%
40-49	380	31.6%

Gander		
Male	760	63.3%
Female	440	36.6%
Nationality		
Saudi	950	79.16%
Non-Saudi	250	20.8%
Educational level		
Illiterate	150	12.5%
pharmaceutical	240	20%
Primary	200	16.6%
Secondary	180	15%
Diploma/University	220	18.3%
Postgraduate	210	17.5%
Occupation		
Freelance	180	15%
Medical sector employee	220	18.3%
Employee in non-medical sector	190	15.8%
Retired	160	13.3%
Student	230	19.16%
Unemployed	220	18.3%

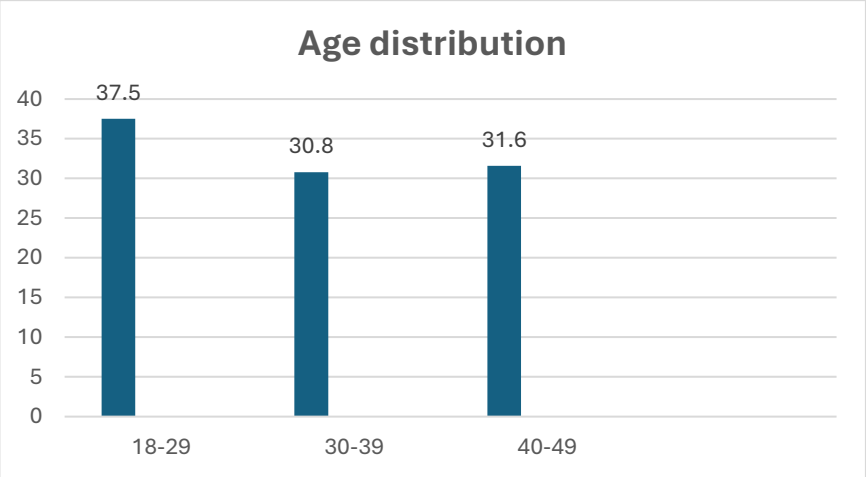

Fig (1): Age distribution among the studied participants

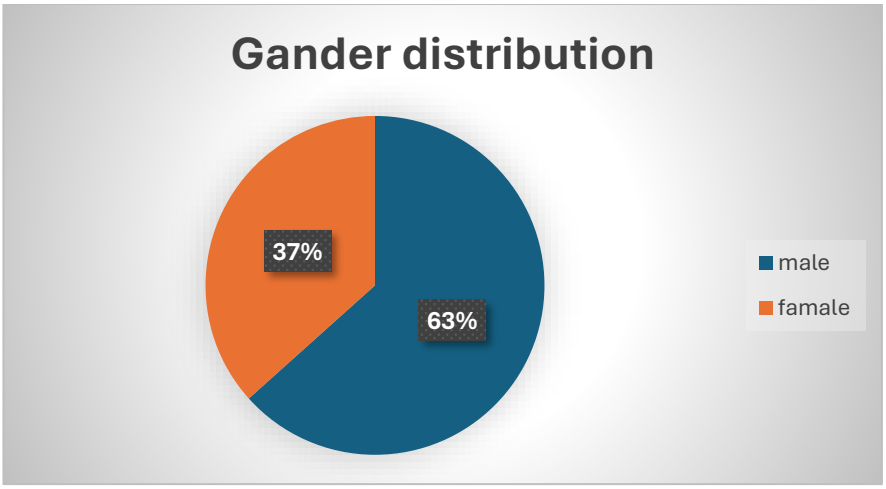

Fig (2): gander distribution among the studied participants

Table (2) & Figure (1-2) showed that according to age category, there is (450) individual with a percentage of (37.5%) their age among (18-29), while there is (370) individual with a percentage of (30.8%) their age (30-39), and there is (380) individual with a percentage of (31.6%) their age (40-49). Regarding to gender, the study showed that the largest percentage of the study members are male with a frequency of (740) and a percentage of (63.3 %), while there are (440) of the study members with a percentage of (36.6%) females. According to nationality, the largest percentage of the study members are Saudi with a percentage of (79.16 %), while there are (250) of the study members with a percentage of (20.8%) non-Saudi.

According to educational level showed that there are (150) individuals with a percentage (12.5%) of whose educational level is illiterate, while there are (240) individuals with a percentage (20%) whose educational level is pharmaceutical, and there are (200) individuals with a percentage (16.6%) whose educational level is Primary school. There are (180) of the study individuals with a percentage (15%) whose educational level is Secondary school. There are (220) individuals with a percentage (18.3%) of whose educational level is Diploma/University, while there are (210) individuals with a percentage (17.5%) whose educational level is Postgraduate.

The findings about occupation showed that there are (180) individuals with a percentage (15%) of whose occupation is Freelance, while there are (220) individuals with a percentage (18.3%) whose occupation is medical sector employee, and there are (190) individuals with a percentage (15.8%) whose occupation is Employee in non-medical sector. There are (160) of the study individuals with a percentage (13.3%) whose occupation is Retired. There are (230) individuals with a percentage (19.16%) of whose occupation is Student, while there are (220) individuals with a percentage (18.3%) whose occupation is Unemployed.

Table (3): Vaccination, annually vaccinated and side effects of vaccine

		Number	Ratio
1	Received influenza vaccine		
	Yes	760	63.3%
	No	440	36.6%
2	Received the vaccine annually		
	Yes	690	57.5%
	No	510	42.5%
3	The vaccine caused side effects		
	Yes	720	60%
	No	480	40%
4	Does children Received the vaccine annually		
	Yes	830	69.16%
	No	370	30.08%
5	Does elderly Received the vaccine annually		
	Yes	720	60%
	No	480	40%

Table (3) showed that according to" Received influenza vaccine" there are (63.3%) of the respondents chose (Yes) and (36.6%) of the respondents chose (No). Regarding to" Received the vaccine annually" there are (57.5%) of the respondents chose (Yes) and (42.5%) of the respondents chose (No). According to" The vaccine caused side effects" there are (60%) of the respondents chose (Yes) and (40%) of the respondents chose (No). Regarding to" Does children Received the vaccine annually" there are (69.16%) of the respondents chose (Yes) and (30.08%) of the respondents chose (No). According to" Does elderly Received the vaccine annually" there are (60%) of the respondents chose (Yes) and (40%) of the respondents chose (No).

Table (4): Perception towards influenza vaccine safety

		Yes		No		Don't know	
		No.	Ratio	No.	Ratio	No.	Ratio
1	Influenza vaccine is safe	450	37.5%	360	30%	390	32.5%
2	There are absolute contraindications to the influenza vaccine	350	29.16%	400	33.3%	450	37.5%
3	Vaccines may cause influenza	620	51.66%	230	19.16%	350	29.16%
4	The vaccine may interact with antibiotics or other medications	360	30%	460	38.3%	380	31.66%
5	The influenza vaccine is safe for patients of diabetes	630	52.5%	420	35%	150	12.5%
6	The influenza vaccine is safe for patients with asthma.	290	24.16%	420	35%	490	40.8%
7	An individual with a very high temperature can receive the influenza vaccine	150	12.5%	620	51.66%	430	35.83%
8	There are serious side effects of the seasonal influenza vaccine	180	15%	630	52.5%	390	32.5%

Table (4) showed that according to" Influenza vaccine is safe" there are (37.5%) of the respondents chose (Yes), (30%) of the respondents chose (No) and (32.5%) chose (Don't Know). Regarding to" There are absolute contraindications to the influenza vaccine" there are (29.16%) of the respondents chose (Yes), (33.3%) of the respondents chose (No) and (37.5%) chose (Don't Know). According to" Vaccines may cause influenza" there are (51.66%) of the respondents chose (Yes), (19.16%) of the respondents chose (No) and (19.16%) chose (Don't Know). Regarding to" The vaccine may interact with antibiotics or other medications" there are (30%) of the respondents chose (Yes), (38.3%) of the respondents chose (No) and (31.66%) chose (Don't Know). Regarding

to" The influenza vaccine is safe for patients of diabetes" there are (52.5%) of the respondents chose (Yes), (35%) of the respondents chose (No) and (12.5%) chose (Don't Know). According to" The influenza vaccine is safe for patients with asthma" there are (24.16%) of the respondents chose (Yes), (35%) of the respondents chose (No) and (40.8%) chose (Don't Know). Regarding to" An individual with a very high temperature can receive the influenza vaccine" there are (12.5%) of the respondents chose (Yes), (51.66%) of the respondents chose (No) and (35.83%) chose (Don't Know). According to" There are serious side effects of the seasonal influenza vaccine" there are (15%) of the respondents chose (Yes), (52.5%) of the respondents chose (No) and (32.5%) chose (Don't Know).

Table (5): Perception towards influenza vaccine efficacy

		Yes		No		Don't know	
		No.	Ratio	No.	Ratio	No.	Ratio
1	Influenza vaccination is effective in preventing influenza infection	640	53.3%	320	26.66%	240	20%
2	Using the seasonal influenza vaccine is the best way to avoid influenza complications	720	60%	230	19.16%	250	20.8%
3	Medication with herbs and natural materials such as honey and ginger are better than the influenza vaccine	170	14.16%	670	55.83%	360	30%
4	Seasonal influenza vaccine can protect against influenza in chronically ill patients	590	49.16%	230	19.16%	380	31.66%
5	Diabetics should be vaccinated with influenza vaccine	360	30%	450	37.5%	390	32.5%
6	Asthma patients should be vaccinated with influenza vaccine	580	48.33%	360	30%	260	21.66%

Table (4) showed that according to" Influenza vaccination is effective in preventing influenza infection" there are (53.3%) of the respondents chose (Yes), (26.66%) of the respondents chose (No) and (20%) chose (Don't Know). Regarding to" Using the seasonal influenza vaccine is the best way to avoid influenza complications" there are (60%) of the respondents chose (Yes), (19.16%) of the respondents chose (No) and (20.08%) chose (Don't Know). According to" Medication with herbs and natural materials such as honey and ginger are better than the influenza vaccine" there are (14.16%) of the respondents chose (Yes), (55.83%) of the respondents chose (No) and (30%) chose (Don't Know). Regarding to" Seasonal influenza vaccine can protect against influenza in chronically ill patients" there are (49.16%) of the respondents chose (Yes), (19.16%) of the respondents chose (No) and (31.66%) chose (Don't Know). Regarding to" Diabetics should be vaccinated with influenza vaccine" there are (30%) of the respondents chose (Yes), (37.5%) of the respondents chose (No) and (32.5%) chose (Don't Know). According to" Asthma patients should be vaccinated with influenza vaccine" there are (48.33%) of the respondents chose (Yes), (30%) of the respondents chose (No) and (21.66%) chose (Don't Know).

5. Discussion

The conducted study has two main aims. First, to study the awareness of influenza vaccine among the general population in Tabuk, Northern Saudi Arabia. Second, evaluation Factors contributing to flu vaccine acceptability. This is a descriptive cross-sectional study. The study includes the general population in Tabuk, Northern Saudi Arabia. The study includes Saudi and none Saudi who speaks Arabic or English, from any age group (18-60 years), male or female, any level of education (from primary to university or more) and low, moderate or high socioeconomic level.

In this study, according to socio demographic characteristics of the studied participants there are many variations. according to age category, there is a percentage of (37.5%) their age among (18-29), while there is a percentage of (30.8%) their age (30-39), and a percentage of (31.6%) their age (40-49). Regarding to gender, the study showed that the largest percentage of the study members are male with a percentage of (63.3 %), while there is a percentage of (36.6%) females.

The findings about occupation showed that there are (180) individuals with a percentage (15%) of whose occupation is Freelance, while there are (220) individuals with a percentage (18.3%) whose occupation is medical sector employee, and there are (190) individuals with a percentage (15.8%) whose occupation is Employee in non-medical sector. There are (160) of the study individuals with a percentage (13.3%) whose occupation is Retired. There are (230) individuals with a percentage (19.16%) of whose occupation is Student, while there are (220) individuals with a percentage (18.3%) whose occupation is Unemployed.

A different study's sociodemographic information revealed that over 25% of participants were healthcare professionals and the majority of participants had advanced degrees. The large percentage of people who self-

reported having strong awareness about influenza (80.4%), believing they were susceptible to the illness (77%), learning about the vaccination (84.9%), and appreciating its significance (72.7%) all demonstrated this. Nonetheless, almost half of the participants believed that influenza was not a serious illness (55.7%) and that receiving the vaccination would not lessen their vulnerability to the illness (53.5%) (16).

The findings according to" Received influenza vaccine" there are (63.3%) of the respondents chose (Yes) and (36.6%) of the respondents chose (No). Regarding to" Does children Received the vaccine annually" there are (69.16%) of the respondents chose (Yes) and (30.08%) of the respondents chose (No). According to" Does elderly Received the vaccine annually" there are (60%) of the respondents chose (Yes) and (40%) of the respondents chose (No).

In a separate study involving parents, adult patients, and medical professionals, the most frequent justifications for refusing the vaccine were not believing in its effectiveness, thinking that living a healthy lifestyle is the only way to prevent influenza, and worries about potentially dangerous side effects. Awaidy et al. found that among healthcare professionals, other obstacles included a lack of belief and logistical ones (such as infrastructure, time commitment, and equipment). Nonetheless, the main obstacle among the general people was ignorance (17).

In our study, according to" Influenza vaccine is safe" there are (37.5%) of the respondents chose (Yes), (30%) of the respondents chose (No) and (32.5%) chose (Don't Know). Regarding to" There are absolute contraindications to the influenza vaccine" there are (29.16%) of the respondents chose (Yes), (33.3%) of the respondents chose (No) and (37.5%) chose (Don't Know). According to" Vaccines may cause influenza" there are (51.66%) of the respondents chose (Yes), (19.16%) of the respondents chose (No) and (19.16%) chose (Don't Know). Regarding to" The influenza vaccine is safe for patients of diabetes" there are (52.5%) of the respondents chose (Yes), (35%) of the respondents chose (No) and (12.5%) chose (Don't Know). According to" The influenza vaccine is safe for patients with asthma" there are (24.16%) of the respondents chose (Yes), (35%) of the respondents chose (No) and (40.8%) chose (Don't Know). Regarding to" An individual with a very high temperature can receive the influenza vaccine" there are (12.5%) of the respondents chose (Yes), (51.66%) of the respondents chose (No) and (35.83%) chose (Don't Know).

Adult Jordanians who were chosen at random to participate in a cross-sectional survey had their knowledge, attitudes, and immunization habits about seasonal influenza and influenza vaccinations assessed. The primary reason for vaccination rejection (41.3%) was the belief that influenza did not pose a threat. Social media accounted for 64.3% of the information that people found out about the influenza vaccine (18).

The results according to" Influenza vaccination is effective in preventing influenza infection" there are (53.3%) of the respondents chose (Yes), (26.66%) of the respondents chose (No) and (20%) chose (Don't Know). Regarding to" Using the seasonal influenza vaccine is the best way to avoid influenza complications" there are (60%) of the respondents chose (Yes), (19.16%) of the respondents chose (No) and (20.08%) chose (Don't Know). According to" Medication with herbs and natural materials such as honey and ginger are better than the influenza vaccine" there are (14.16%) of the respondents chose (Yes), (55.83%) of the respondents chose (No) and (30%) chose (Don't Know). Regarding to" Seasonal influenza vaccine can protect against influenza in chronically ill patients" there are (49.16%) of the respondents chose (Yes), (19.16%) of the respondents chose (No) and (31.66%) chose (Don't Know).

A study was conducted in 2017 with the goal of evaluating Saudi citizens' views and understanding regarding seasonal influenza vaccinations. 1298 adult Saudi nationals who were 19 years of age or older were included in this study. Of the individuals, 44.53% had received the seasonal influenza vaccination. 36.67% of respondents were aware that the seasonal influenza vaccination is recommended for people with chronic illnesses. Those who had received vaccinations in this study had a greater degree of understanding than those who had not. The majority of participants stated that guidance from healthcare professionals was the most trustworthy source of information (18)

In Al-Madinah City, a second cross-sectional study was carried out to investigate the relationship between the general population's vaccination status and knowledge of the influenza vaccine. The survey revealed that although the general public had low awareness and attitudes toward influenza vaccination, the rate of vaccine uptake was generally accepted (15).

6. Recommendations

Potential solutions include encouraging social media platforms to ask users to verify the accuracy of their posts

and the agency being vigilant in identifying and flagging inappropriate and inaccurate information, utilizing patient narratives and/or celebrity endorsements, and facilitating direct communication between providers and patients. In order to increase vaccination knowledge and decrease the frequency of vaccine hesitancy, other strategies include smartphone apps, digital gamification, electronic reminder systems, shared decision making, and appropriately training and preparing healthcare professionals to communicate with patients, address their concerns, and promote vaccination programs.

7. Conclusion

The study's findings indicate that Saudi Arabia has a moderate immunization rate. It is critical to raise the influenza vaccination rate in Saudi Arabia in order to maintain a uniform level of population protection. Increasing knowledge and awareness and combating false information about the influenza vaccination may focus on a number of issues, including the safety and efficacy of influenza vaccines, the best times to administer them to patients, patient-specific vaccination recommendations, effective physician communication and counseling, and the use of social media platforms to spread information from reputable and authentic sources. Furthermore, it is imperative to continuously remind medical personnel of the need of screening patients and providing immunization guidance. Additionally, at this time of increased awareness due to the COVID-19 pandemic, various public healthcare bodies should take use of the chance to educate the public and disseminate accurate information regarding vaccinations in general as well as the influenza vaccination in particular.

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