

Awareness and Knowledge of Covid 19 Among General Population In Tiruvallur District

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ABSTRACT

The behavior of general public in Tiruvallur district will likely to have an effect on how the Covid 19 disease spreads. Covid 19 is the dreadful pandemic that has its spread worldwide. This study is aimed to evaluate the knowledge and awareness among the general population in Tiruvallur district.

METHODS: A cross sectional survey was conducted among 370 persons in Tiruvallur district. A questionnaire survey has been used to collect the data which comprises of 15 questions among persons of various age groups. An online survey was conducted using "Google forms". The questionnaire was distributed using online platform and the data has been recorded.

RESULTS: Participants generally had a satisfactory knowledge regarding the preventive measures, implementing social distancing and ways to improve the immunity in the prevention of the disease spread. 69.25% of the population has suggested wearing mask, vaccination and social distancing. 62.03% of the population preferred to wash their hands frequently and before taking food etc. 94.65% of the populations were vaccinated for COVID 19. A significant p value of <0.05 was obtained regarding the booster dose of vaccination.

CONCLUSION: The result showed that males have higher knowledge and awareness than females during this period of pandemic. Government should conduct campaigns in creating awareness among the population and to alleviate the misunderstanding and misinformation regarding the spread of COVID 19.

KEYWORDS: COVID, AWARENESS, KNOWLEDGE

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I. Introduction

Corona virus (COVID) can be considered one of the fastest spreading viral infections. Since it got discovered in Wuhan, china at the end of 2019, more than one million humans were infected in more than 200 countries in less than four months¹⁻⁴. At the beginning of June 2020, more than 7,676,209 confirmed new cases were reported, with more than 4,26,158 deaths attributed to the corona virus infections⁵. The symptoms of COVID 19 are similar to that of other beta corona virus⁶. The symptoms include fever, cough, dyspnea, weakness and fatigue, headache and diarrhea⁷.

These symptoms appear after an incubation period which ranges from 0 to 24 days with a median duration of 3 days⁸. This period mainly depends on patient's age and immune system status⁹. The use of RNA dependent RNA polymerase inhibitors (Remdesivir) and anti-inflammatory agents (Dexamethasone) showed promising clinical results. Moreover the highest reductions of death risk and all-cause mortality was seen in patients with severe COVID 19 infections¹⁰.

The SARS outbreak control solely owes to the usage of public-health measures such as wearing surgical mask, washing hands, maintaining proper self hygiene, and isolation of infected patients¹¹. Prevention is the only way and so the authorities worldwide have implemented travel restrictions, lockdowns, and workplace hazard control etc.¹². Knowledge is a remembrance of facts, skills and information acquired through experience or education¹³. Awareness is perceiving, knowing, feeling or being conscious of events objects, thoughts, emotions or sensory pattern¹⁴. Knowledge and awareness play crucial role in preventing spread of COVID 19.

A survey was conducted among 370 persons residing near the locality of Tiruvallur. The interpretation and analysis issues can be time consuming for the respondents^{15,16}. So the current survey aims to measure the knowledge and awareness of COVID 19 among general population residing in Tiruvallur.

II. Materials And Methods

A cross sectional online survey was conducted to assess the knowledge and awareness of COVID 19 among general population in Tiruvallur. This survey has been conducted among 370 persons. Google forms were being used to collect the data. This questionnaire survey comprised of 15 questions. A self administered

questionnaire was developed after an extensive study of already published articles and according to WHO guidelines. Participants were provided with detailed information about the purpose, objectives before filling the Google forms. The participants age groups were separated as >30 and <30 yrs with male and female differentiation and the p value was obtained. A p value of <0.05 represented a significant difference.

STATSISTICAL ANALYSIS

Question	Response	Frequency	Percentage
1. Which is the most effective method for prevention of covid 19	Maintaining social distance	64	17.11%
	Vaccination	25	6.68%
	Wearing face mask	13	3.48%
	Frequent hand wash	13	3.48%
	All the above	259	69.25%
2. When do you wash your hands	After removing the mask	25	6.68%
	After touching solid objects	22	5.88%
	Before taking food	95	25.40%
	All the above	232	62.03%
3. Which type of face mask do you think will protect you from covid 19	N 95 face mask	148	39.57%
	Disposable surgical mask	93	24.87%
	Cloth mask	48	12.83%
	Surgical mask underneath and a cloth mask on top	85	22.73%
4. Do you believe that wearing a mask maintaining social distance and vaccination reduce the chance of covid 19 spread	Yes	349	93.32%
	No	24	6.42%
5. Do you believe that there will be a third wave of covid 19 in India	Yes	295	78.88%
	No	77	20.59%
6. Which of the following source provide you information about covid 19	Newspaper, television, radio	33	8.82
	Social media	76	20.32
	Family and friends	12	3.21
	All the above	253	67.65
7. How do you dispose your face mask	Fold towards, tie and through it in a closed bin	323	86.36%
	Throw it anywhere	9	2.41%
	Burn it	42	11.23%
8. Are you vaccinated for covid 19	Yes	354	94.65%
	No	17	4.55%
9. If yes what type of vaccine have you taken	Covi shield	189	50.53%
	Covaxin	167	44.65%
	Sputnik v	5	1.34%
10. Did you have any side effects	Yes	70	18.72%
	No	290	77.54%
11. Did everyone in your household get vaccinated for covid 19	Yes	317	84.76%
	No	55	14.71%
12. Have you heard about booster dose	Yes	282	75.40%
	No	91	24.33%
13. Are you afraid of attending social occasions since you have not taken covid 19 vaccination	Yes	253	67.65%
	No	118	31.55%
14. Do you think there is no difference in risk of covid infection between vaccinated and non vaccinated people	Yes	232	62.03%
	No	142	37.97%
15. What precautionary measure do you take to improve your immunity during covid 19	Kabasura kudineer	83	22.19%
	Zinc and vitamin c	67	17.91%
	Both	185	49.47%
	Nothing	38	10.16%

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QUESTION	RESPONSE	MALE	FEMALE	P-VALUE
1. Which is the most effective method for prevention of covid 19	Maintaining social distance	43(67.2)	21(32.8)	0.15
	Vaccination	14(56)	11(44)	
	Wearing face mask	7(53.8)	6(46.2)	
	Frequent hand wash	4(30.8)	9(69.2)	
	All the above	143(55.2)	116(44.8)	
2. When do you wash your hands	After removing the mask	13(52)	12(48)	0.23
	After touching solid objects	16(72.7)	6(27.3)	
	Before taking food	58(61.1)	37(38.9)	
	All the above	124(53.4)	108(46.6)	
3. Which type of face mask do you think will protect you from covid 19	N 95 face mask	80(54.1)	68(45.9)	0.10
	Disposable surgical mask	49(52.7)	44(47.3)	
	Cloth mask	35(72.9)	13(27.1)	
	Surgical mask underneath and a cloth mask on top	47(55.3)	38(44.7)	
4. Do you believe that wearing a mask maintaining social distance and vaccination reduce the chance of covid 19 spread	Yes	198(56.7)	151(43.3)	0.66
	No	12(50)	12(50)	
5. Do you believe that there will be a third wave of covid 19 in India	Yes	168(56.9)	127(43.1)	0.80
	No	42(54.5)	35(45.5)	
6. Which of the following source provide you information about covid 19	Newspaper, television, radio	17(51.5)	16(48.5)	0.56
	Social media	48(63.2)	28(36.8)	
	Family and friends	6(50)	6(50)	
	All the above	140(55.3)	113(44.7)	
7. How do you dispose your face mask	Fold towards, tie and through it in a closed bin	191(59.1)	132(40.9)	<0.05*
	Throw it anywhere	4(44.4)	5(55.6)	
	Burn it	16(38.1)	26(61.9)	
8. Are you vaccinated for covid 19	Yes	201(56.8)	153(43.2)	0.58
	No	8(47.1)	9(52.9)	
9. If yes what type of vaccine have you taken	Covi shield	103(54.5)	86(45.5)	0.41
	Covaxin	98(58.7)	69(41.3)	
	Sputnik v	4(80)	1(20)	
10. Did you have any side effects	Yes	34(48.6)	36(51.4)	0.16
	No	170(58.6)	120(41.4)	
11. Did everyone in your household get vaccinated for covid 19	Yes	185(58.4)	132(41.6)	0.10
	No	25(45.5)	30(54.5)	
12. Have you heard about booster dose	Yes	168(59.6)	114(40.4)	<0.05*
	No	42(46.2)	49(53.8)	
13. Are you afraid of attending social occasions since you have not taken covid 19 vaccination	Yes	157(62.1)	53(44.9)	<0.01**
	No	53(44.9)	65(55.1)	
14. Do you think there is no difference in risk of covid infection between vaccinated and non vaccinated people	Yes	143(61.6)	89(38.4)	<0.05*
	No	68(47.9)	74(52.1)	
15. What precautionary measure do	Kabasura kudineer	47(56.6)	36(43.4)	0.06

you take to improve your immunity during covid 19	Zinc and vitamin c	38(56.7)	29(43.3)
	Both	112(60.5)	73(39.5)
	nothing	14(36.8)	24(63.2)

Table 2 represents the frequency and percentage of male and female participants

Question	Response	Age		P value
		>30	<30	
1. Which is the most effective method for prevention of covid 19	Maintaining social distance	44(68.8)	20(31.2)	<0.01**
	Vaccination	11(44)	14(56)	
	Wearing face mask	2(15.4)	11(84.6)	
	Frequent hand wash	8(61.5)	5(38.5)	
	All the above	165(64)	93(36)	
2. When do you wash your hands	After removing the mask	14(56)	11(44)	<0.05*
	After touching solid objects	9(40.9)	13(59.1)	
	Before taking food	53(55.8)	42(44.2)	
	All the above	154(66.7)	77(33.3)	
3. Which type of face mask do you think will protect you from covid 19	N 95 face mask	104(70.7)	43(29.3)	<0.05*
	Disposable surgical mask	51(54.8)	42(45.2)	
	Cloth mask	24(50)	24(50)	
	Surgical mask underneath and a cloth mask on top	51(60)	34(40)	
4. Do you believe that wearing a mask maintaining social distance and vaccination reduce the chance of covid 19 spread	Yes	211(60.5)	137(39.4)	0.23
	No	18(75)	6(25)	
5. Do you believe that there will be a third wave of covid 19 in India	Yes	175(59.3)	120(40.7)	0.12
	No	53(69.7)	23(30.3)	
6. Which of the following source provide you information about covid 19	Newspaper, television, radio	20(60.6)	13(39.4)	<0.05*
	Social media	55(72.4)	21(27.6)	
	Family and friends	3(25)	9(75)	
	All the above	152(60.3)	100(39.7)	
7. How do you dispose your face mask	Fold towards, tie and through it in a closed bin	202(62.5)	121(37.5)	0.32
	Throw it anywhere	6(75)	2(25)	
	Burn it	22(52.4)	20(47.6)	
8. Are you vaccinated for covid 19	Yes	220(62.3)	133(37.7)	0.31
	No	8(47.1)	9(52.9)	
9. If yes what type of vaccine have you taken	Covi shield	133(70.7)	55(29.3)	<0.01**
	Covaxin	88(52.7)	79(47.3)	
	Sputnik v	4(80)	1(20)	
10. Did you have any side effects	Yes	46(65.7)	24(34.3)	0.61
	No	178(61.6)	111(38.4)	
11. Did everyone in your household get vaccinated for covid 19	Yes	197(62.3)	119(37.7)	0.66
	No	32(58.2)	23(41.8)	
12. Have you heard about booster dose	Yes	176(62.4)	106(37.6)	0.63
	No	53(58.9)	37(41.1)	
13. Are you afraid of attending social occasions since you have not taken covid 19 vaccination	Yes	145(57.3)	108(42.7)	<0.05*
	No	82(70.1)	35(29.9)	
14. Do you think there is no difference in risk of covid infection between vaccinated and non vaccinated people	Yes	125(53.9)	107(46.1)	<0.01**
	No	105(74.5)	36(25.5)	
15. What precautionary measure do you take to improve your immunity during covid 19	Kabasura kudineer	50(60.2)	33(39.8)	0.47
	Zinc and vitamin c	42(62.7)	25(37.3)	
	Both	110(59.5)	75(40.5)	
	nothing	27(73)	10(27)	

Table 3 represents the age group differentiation of <30 and >30yrs

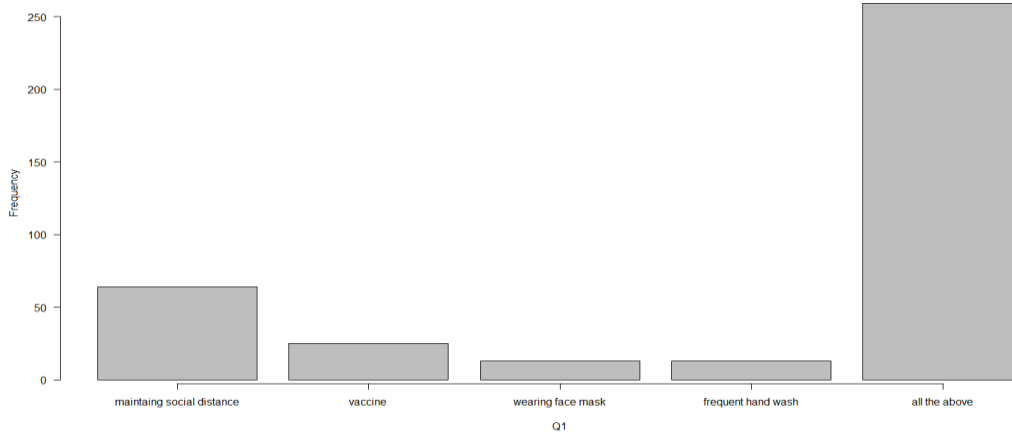


Figure shows bar chart for the most effective method for prevention of COVID 19. X axis represents the frequency whereas Y axis represents the categories for effective method of prevention. 69.25% of the participants maintained effective social distancing, vaccination, frequent hand wash and wearing face mask etc.

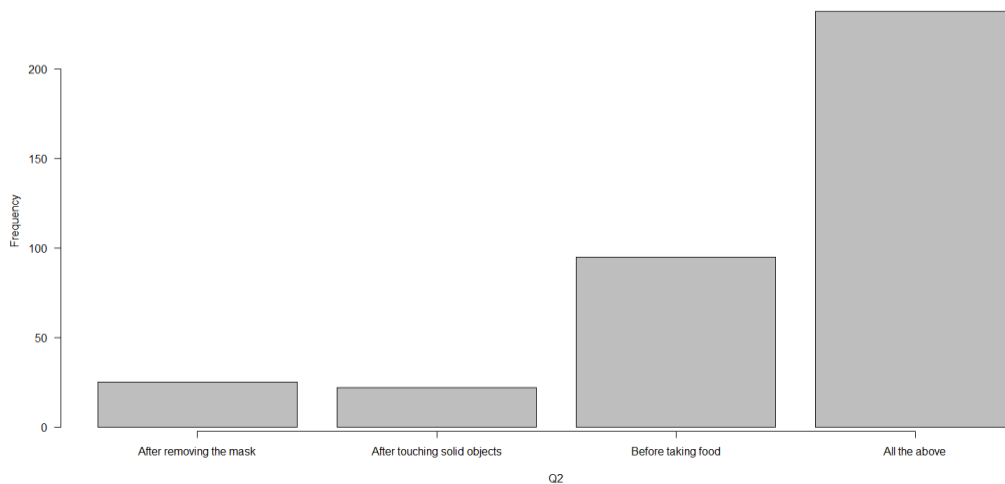


Figure shows bar chart which represents the specific period of washing the hands. In which 62.03% of the participants performed active hand washing after removing mask, touching solid objects and before taking foods. 53.4% of males practice hand washes after removing mask, before food etc.

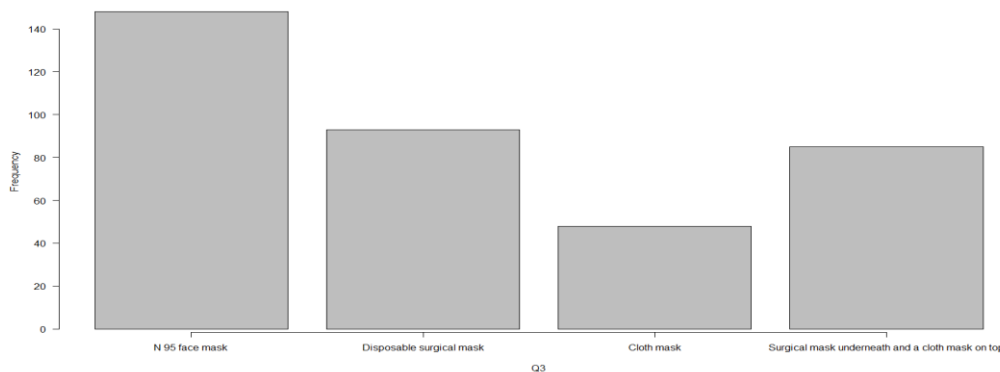


Figure shows bar chart in which higher frequency of males prefers to wear N95 face mask. A p-value of 0.10 was obtained on chi-square test which was statistically insignificant.

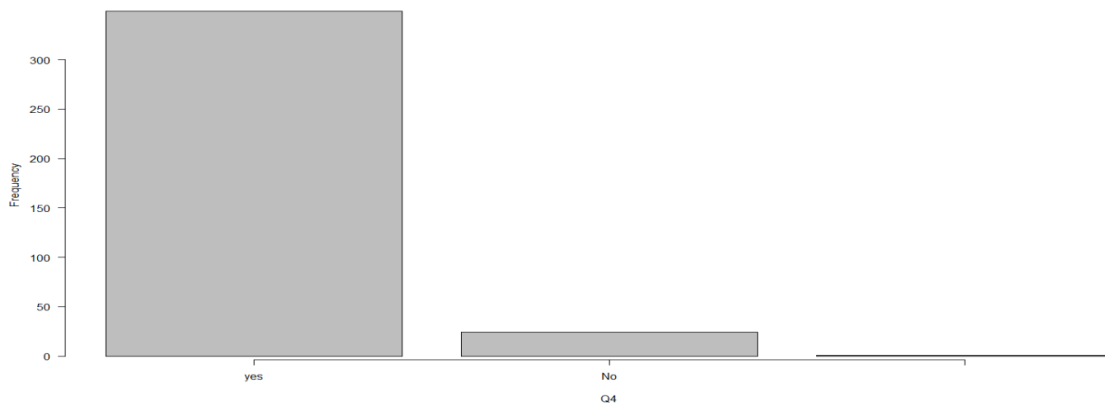


Figure shows bar chart that denotes that higher frequency of males maintain proper social distancing, wear mask and were vaccinated and a p value of 0.66 was obtained. 50% of both males and females do not wear mask and perform social distancing

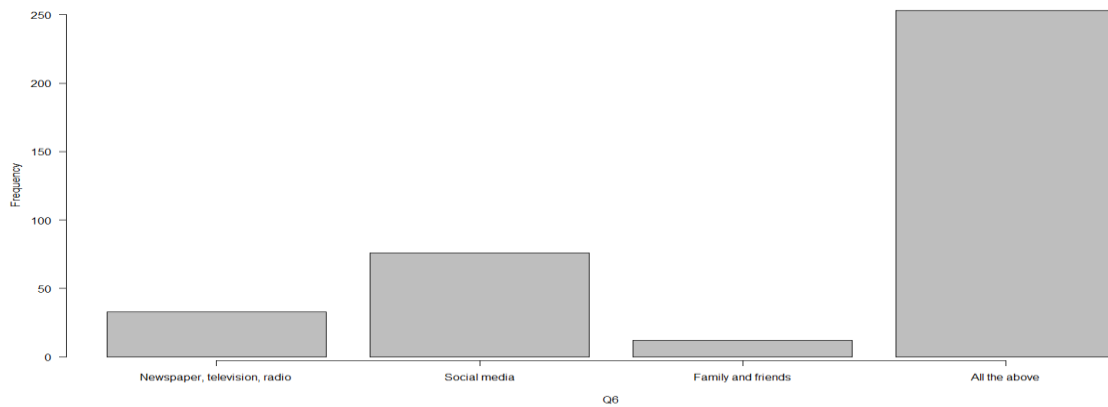


Figure shows the bar chart higher frequency of males gather news on COVID 19 through newspaper, radio, friends, family members and social media etc and a p value of 0.56 was obtained which was insignificant.

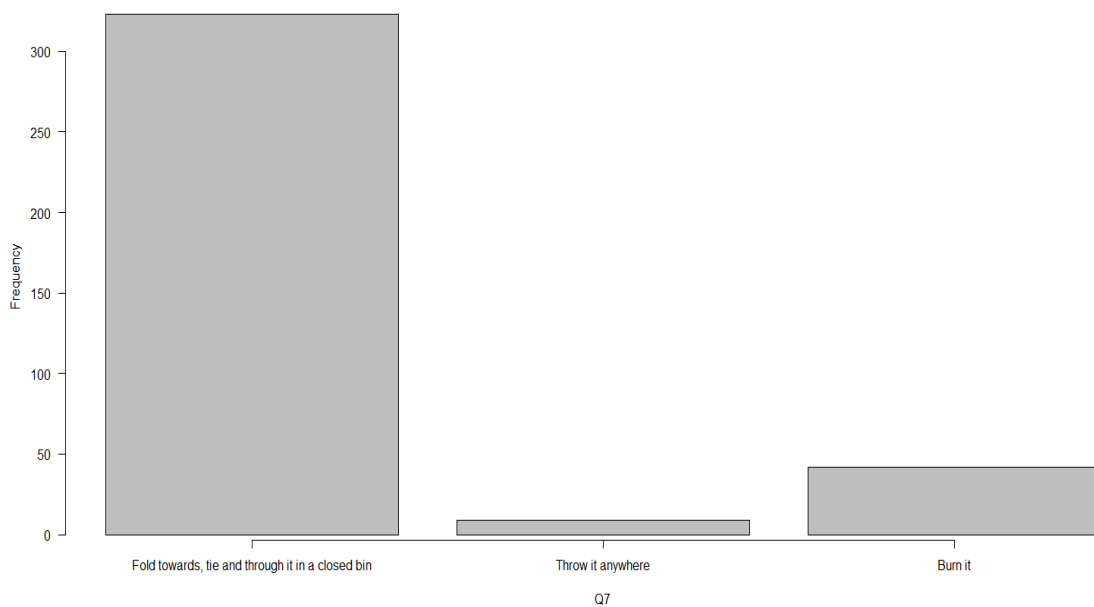


Figure shows bar chart in which higher frequency of participant fold and throw their mask in closed bin and a p value of <math><0.05</math> was obtained which is significant.

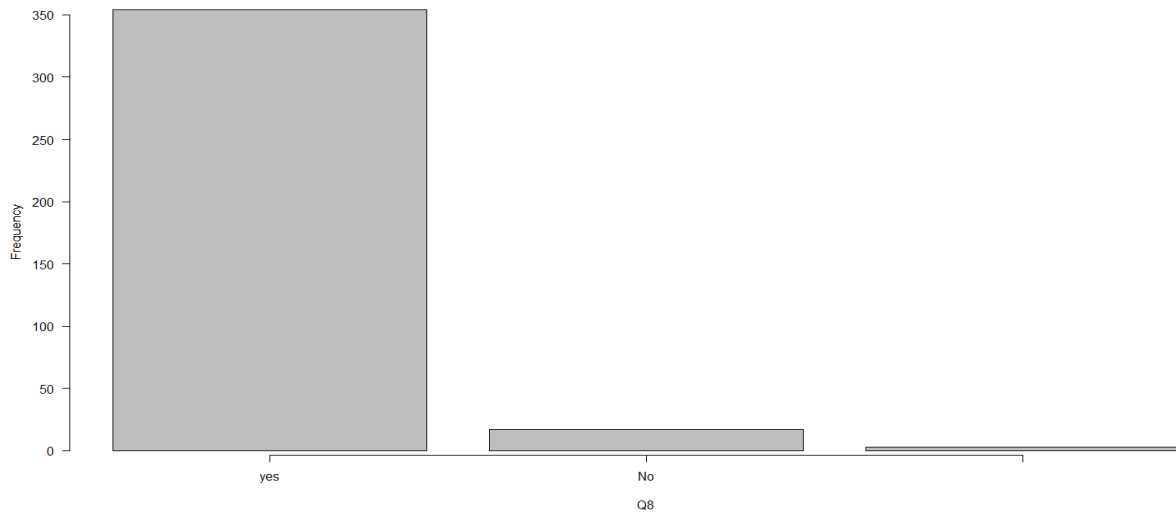


Figure shows bar chart in which 56.8% of male participants are vaccinated for Covid 19 and 43.2% of females and p value of 0.58 was obtained which is insignificant.

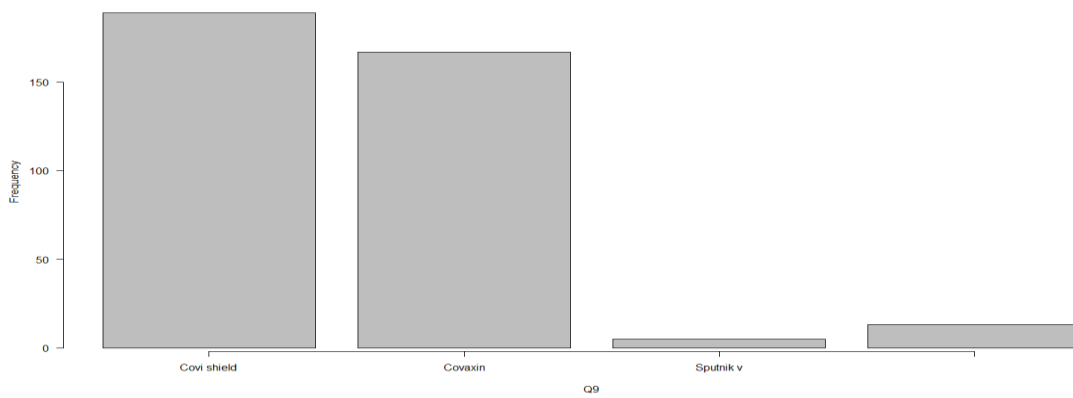


Figure shows bar chart in higher frequency of participants are vaccinated with Covi-shield and 58.7% were vaccinated with Covaxin. A p value of 0.41 was obtained which is statistically insignificant. Lesser frequency participants were vaccinated with sputnik.

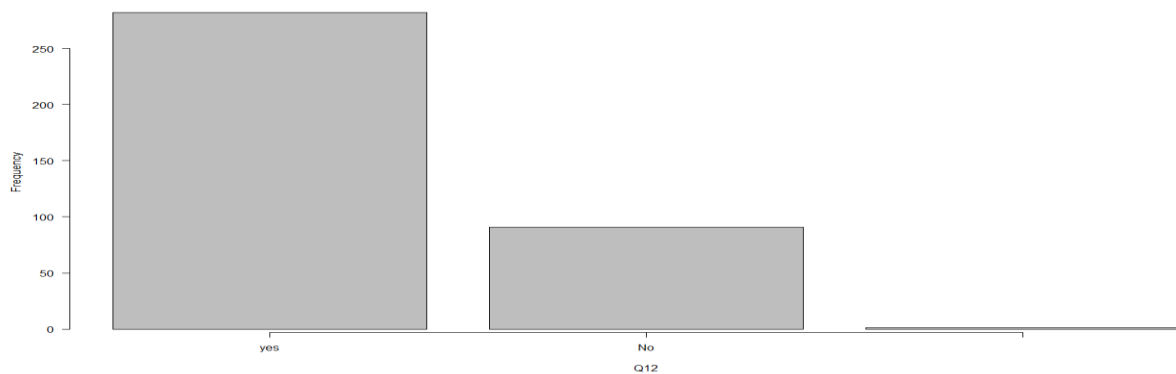


Figure shows bar chart in which higher number of male participants have said Yes for the booster dose with percentage of 59.6% and female participants of 40.4 and a p value of significant <0.05 value was obtained.

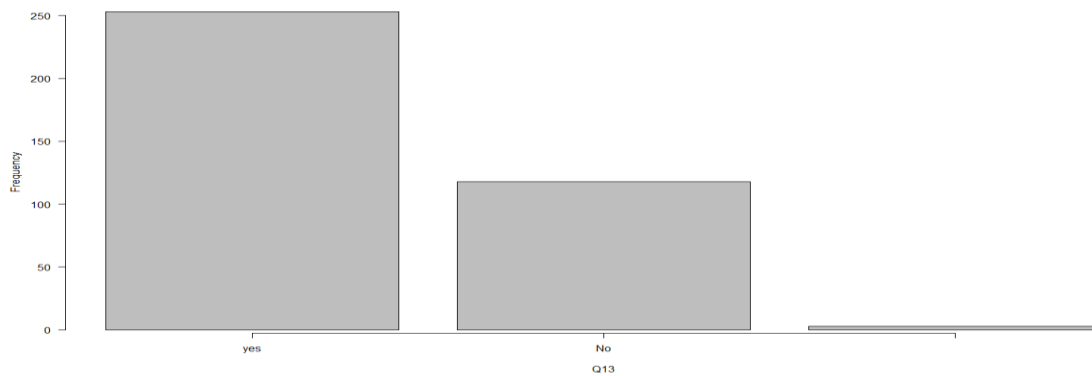


Figure shows bar chart in which 62.1% of males and 44.9% of females have said Yes that they were afraid to attend the occasions since they have not vaccinated for COVID 19 while 44.9% of males and 55.1% of females have said NO that they were not afraid and a p value of <0.01 was obtained.

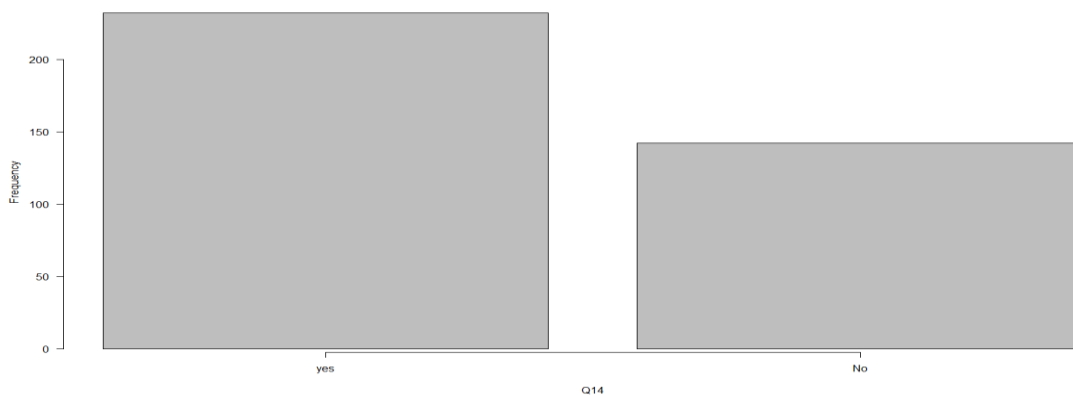


Figure shows bar chart in which 61.6% of male participants and 38.4% female participants said YES that there is no difference of COVID infection between vaccinated and non vaccinated people. A p value of <0.05 was obtained which is significant.

III. Discussion:

Public health education is an effective way to prepare every individual in facing this COVID situation. This knowledge, awareness survey provide the possibility of facing the disastrous situation and encourage positive attitude and healthy practices among each and every individual¹⁷. Overall there was a good consensus that COVID is a serious threat and there was relatively high awareness about asymptomatic transmission nature of COVID 19.

This survey provides a novel data on the perception of knowledge and awareness among the populations in Thiruvallur district. There was an increased knowledge and awareness shown among the males. There was a significant p value of <0.05 on the awareness about the booster dose and infection among the vaccinated and non-vaccinated individuals. 93.32% population believes that wearing mask, maintaining social distancing can prevent the COVID 19. 60.3% of males said that newspaper, friends and family and social media provided the required sources of information during COVID 19.

People should maintain at least 6 feet distance from one another in public settings. Always masks and gloves should be worn in public settings. Frequent touching of eyes, nose, and mouth should be avoided. Frequent hand washing techniques should be followed even when the hands don't look visibly dirty. If using soap, hands should be washed for about at least 40 to 60 seconds. Alcohol-based sanitizers can be used wherever feasible at least for 20 seconds¹⁸.

Awareness of using chlorine and alcohol to reduce the spread of the disease is in line with the recommendation of the Center for Disease Control and Prevention (CDC) to use chlorine and alcohol on different surfaces for sterilization purposes¹⁹. Respiratory etiquette should be followed and spitting in a public setting is strictly prohibited. Pregnant women and patient with co-morbidities should be given extra care.

Even with the presence of some recommended therapies such as Remdesivir and Dexamethasone, the promotion and implementation of preventive measures is the single most important and widely recommended intervention to mitigate the virus's propagation²⁰.

IV. Conclusion

There is good awareness of males than females among the knowledge and awareness of COVID 19. Government agencies should organize information campaigns to correct misunderstanding and misinformation and they should use social media platform to target this information.

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