Novel Coronavirus (Covid-19) Knowledge and Awareness: A Survey of Thiruvallur District, Tamilnadu

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Abstract
Objectives: To the level of awareness, attitudes, and practices related to coronavirus (COVID19) Pandemic among the public in Thiruvallur District, Tamilnadu.
Methods: A prospective study was conducted in Thiruvallur District, Tamilnadu. A total number of 316 Respondents. (Male 161, Female 151 and Prefer not to say 4). Data were processed and analyzed by the Statistical Package for social science. A chi-square test was used to investigate the level of association among variables at the significance level of p<0.05.
Result: A total of 316 respondents, the majority was male, and it is found that the majority of respondents are below 31-40 years of age group. The majority of respondents (89.9%) are having awareness about COVID19 and the majority of respondents Information regarding COVID-19 from Newspaper and television news. The majority of the respondents identified prevention methods, including washing hands (87.7%), using antiviral & antibacterial (76.3%), and wearing a mask (82.6 %) Most of the participants (73.1 %) say health Department is doing well.
Conclusion: Coronaviruses (COVID 19) has a huge impact on society and the economy. It takes at least three to five years to get a balanced economy. Moreover, Unemployment will become a big problem. Though we have enough awareness, we have to be very alert that we have to protect ourselves until we find preventive medicine.
Keywords: Coronavirus, COVID- 19, MERS, Pandemic, Outbreak, Social Distance, Lock Down and Work from home.

Introduction

Coronaviruses (COVID19) are a large family of viruses that may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) (www.who.int) A novel coronavirus outbreak was first documented in Wuhan, Hubei Province, China in December 2019. (www.labmanager.com) The World Health Organization declared the outbreak a Public Health Emergency of International Concern on 30 January 2020. (www.who.int) The virus is primarily spread between people during close contact, and Common symptoms include fever, cough, fatigue, shortness of breath, and loss of smell (www.cdc.gov/coronavirus)

On 30 January, India reported its first case of COVID-19 in Kerala, which rose to three cases by 3 February; all were students who had returned from Wuhan, China (Davyreid) As of 12 May 2020, the Ministry of Health and Family Welfare has confirmed a total of 70,756 cases, 22,455 recoveries (including one migration) and 2,293 deaths in the country. The infection rate of COVID-19 in India is reported to be 1.7, significantly lower than in the worst affected countries (www.mohfw.gov.in).

Corona-viruses (Covid19) Pandemic in India

By early to mid-March 2020, the government had drawn up plans to deal with a worsening of the pandemic in the country. This included seven ministries working together to set up additional quarantine and treatment facilities across the country. States and twenty ministries, including Home, Defence, Railways, Labour, Minority Affairs, Aviation, and Tourism, were informed of the containment plan. (https://economictimes.com)

The recovery rate in India is more than 16%, while the death rate is about 3%. In comparison, the death rate in Spain stands at 10%; it is 5% in the US and 13% in both the UK and Italy. The death rate in the Netherlands is 11%, even though the number of positive cases is about 33,405 (https://timesofindia.com)

Preventive Activities

- Nation-wide lock-down
- Visas canceled for foreign nationals traveling from affected countries
- Ensuring availability of coronavirus drugs in India
- Coronavirus screening, testing and quarantining at Indian airports
- Labs testing for coronavirus in India
- Visa cancellations and travel restrictions.

These terms describe approaches for limiting the spread of disease during epidemics and pandemics (www.mayoclinic.org)

1. Social Distancing in Public Means People (www.health.gov.au)

- Stay at home and only go out if it is essential.
- Keep 1.5 meters away from others.
- Avoid physical greetings such as handshaking, hugs, and kisses.
- Use tap and go instead of cash.

- Travel at quiet times and avoid crowds
- Avoid public gatherings and at-risk groups like older people.
- Practice good hygiene

2. Quarantine

Stay in a well-ventilated single-room, preferably with an attached/separate toilet. If another family member needs to stay in the same room, it's advisable to maintain a distance of at least 1 meter between the two.

- Needs to stay away from older adults, pregnant women, children, and persons with co-morbidities within the household.
- Restrict his/her movement within the house.
- Under no circumstances, attend any social/ religious gathering, e.g., weddings, condolences, etc.

3. Isolation

Separating people who are ill from others to keep the disease from spreading.

Coronavirus (COVID-19) Pandemic in Thiruvallur District, Tamilnadu

Tiruvallur, a fast-developing district in the southern state of Tamil Nadu. Tiruvallur is a town near Chennai city, giving it a special industrial and commercial importance. Existence of many academic institutions, production units, business establishments, religious monuments, and temples further enhances the strategic importance of Tiruvallur district for the state of Tamil Nadu (https://tiruvallur.nic.in/)

The first case of the COVID-19 pandemic in the Indian state of Tamil Nadu was reported on 7 March 2020. The Department of Health and Family Welfare has confirmed a total of 8,718 cases, including 61 deaths and 2,134 recoveries, as of 12 May 2020 (https://nhmtn.maps.arcgis.com)

Coronavirus (COVID-19) Pandemic in Thiruvallur District

Zones	Diagnosed cases	Death	Recovered cases	Active cases	Population
Red	467	3	66	398	1,111,812

Source: https://nhmtn.maps.arcgis.com (12th May 2020)

In a move to contain the spread of COVID –19, the Tiruvallur district administration has quarantined 250 villages in the district and has made them self-sufficient by forming village committees to supply essentials (Narayanan, V., 2020)

Methods

Study Design and Setting: A survey was conducted On April 2020 in Thiruvallur District.

Sample and Sampling Technique: A convenience method of sampling was adopted, and a total of 316 agreed to participate and included in the study.

Data Collection

There are two types of data collections.
- Primary data collection
- Secondary data collection

Primary data

Primary data has first had the information it was collected from the respondent by using a Questionnaire. The researcher has obtained the primary data through the survey method.

Secondary data

The secondary data was collected through secondary sources like Websites, magazines, and newspapers.

Data Analysis

Data were processed by the Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics were used to describe all variables. Mean, and the standard deviation was used to identify mean scores for different studied domains. The Chi-square test was used to test the hypothesis. P value< 0.05 was considered statistically significant.
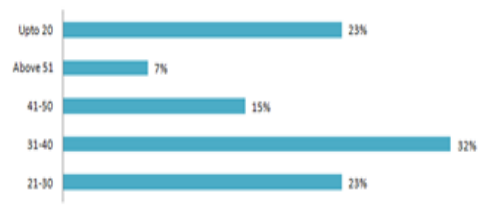
Percentage Analysis

Chart 1: Gender wise Classification of the Respondents
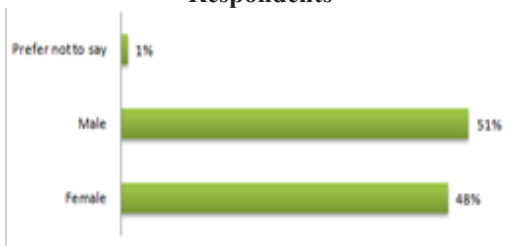
Source: Computed from Primary Data

Interpretation: The Chart shows out of 316 respondents, One sixty-one (51%) respondents are male, and one fifty-one (48%) respondents are female, and also, four (1%) respondents are not interested in saying. Thus, it is inferred that the majority of the respondents are Male.
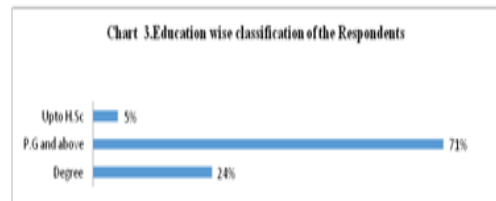
Chart 2: Age wise Classification of the Respondents

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, Seventy-two (23%) respondents are within the age of 20 years; Seventy four (23%) respondents age ranges between 21 and 30 years; one hundred and one (32%) respondents age ranges from 31 to 40 years; forty-seven (15%) respondents age ranges from 41 to 50 years and the rest twenty-two (7%) respondents are above the age of 51 years. Thus, the majority of the respondents' age ranges from 31 to 40 years.

Chart 3: Education wise Classification of the Respondents

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, Seventy-five (24%) respondents are from the degree, two hundred and twenty-four (71%) of respondents from PG and above, and the rest seventeen (5%) respondents are up to H.Sc. Thus the majority of respondents' are from PG and above.
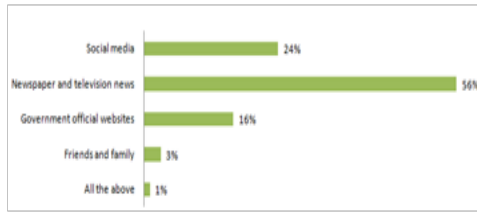
Chart 4: Awareness about Corona virus (COVID-19)

Source: Computed from Primary Data

Interpretation: Most of the participants (90%) respondents are aware of COVID-19; (4%)

respondents are not aware of it, and the rest nineteen (6%) respondents are not sure. Thus, the majority of the respondent's ages are aware of COVID-19.

Chart 5: Information Regarding COVID-19

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents got Information regarding COVID-19 through, ten (3%) respondents from friends and family; fifty-one (16%) respondents from Government official websites; one hundred and seventy-eight (56%) respondents from Newspaper and television news; seventy-five (24%) respondents from social media and the rest two (1%) respondents are all the above. Thus, the majority of the respondents' are known information through newspaper and television news.

Chart 6: People can Spread the Virus without Showing Symptoms
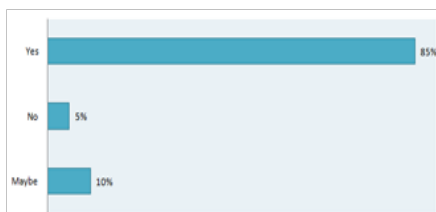
Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, people can spread the virus without showing symptoms, two hundred and sixty-eight (85%) respondents said yes, sixteen (5%) respondents said no, and the rest thirty-two (10%) respondents said maybe. Thus, the majority of the respondents' said yes that people could spread the virus without showing the symptoms.

Chart 7: Wear a Medical Grade Mask when you Leave your Home

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, wear a medical-grade mask when you leave your home, two hundred and seventy-seven (88%) respondents said yes; twenty-two (7%) respondents said no, and the rest seventeen (5%) respondents said maybe. Thus, the majority of the respondents' said yes that people must wear a medical-grade mask when they leave home.

Chart 8: Cover your hair to Prevent virus Spread

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, cover your hair to prevent virus spread, one hundred and thirty-two (42%) respondents said yes; one hundred and fifty-eight (50%) respondents said No, and the rest twenty-six (8%) respondents said maybe. Thus, the majority of the respondents' said No that people don't want to cover their hair to prevent virus spread.

Chart 9: Corona virus by touching infected surfaces someone coughed/sneezed on the day before, and simply touching it then touching your uncovered face
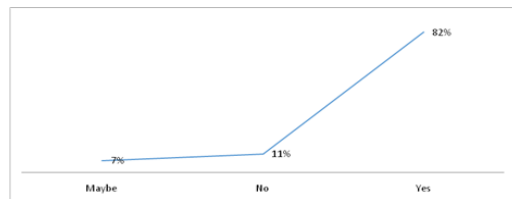
Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, touching infected, Two hundred and sixty (82%) respondents said yes; thirty-five (11%) respondents said No, and the rest twenty one (7%) respondents said maybe. Thus, the majority of the respondents' said Yes that corona virus by touching infected surfaces someone coughed/sneezed on the day before and simply touching it then touching your uncovered face.

Chart 10: In your Home with Antiviral & Antibacterial Spray to Protect Yourself
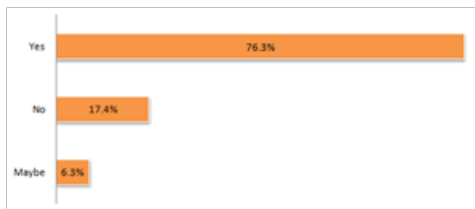
Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, protect you, Two hundred and forty-one (76.3%) respondents said yes; fifty-five (17.4%) respondents said No, and the rest twenty (6.3%) respondents said maybe. Thus, the majority of the respondents' said Yes that staying in a home with antiviral and antibacterial sprays to protect.
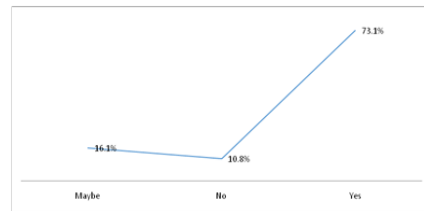
Chart 11: Health Department is doing enough to prevent the outbreak from spreading
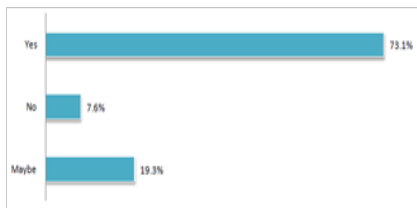
Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, the health department, two hundred and thirty-one (73.1%) respondents said yes; twenty-four (7.6%) respondents said No, and the rest sixty-one (19.3%) respondents said maybe. Thus, the majority of the respondents' said yes that your country's health department is doing enough to prevent the outbreak from spreading.
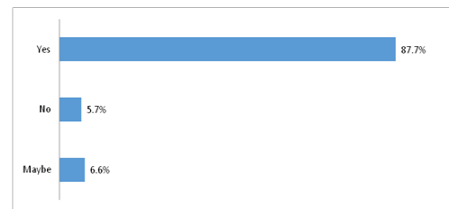
Chart 12: Health Department is doing Enough to Cure those Infected

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, two hundred and thirty-one (73.1%) respondents said yes; thirty-four (10.8%) respondents said No, and the rest fifty-one (16.1%) respondents said maybe. Thus, the majority of the respondents' said, Yes, that your country's health department is doing enough to cure those infected.
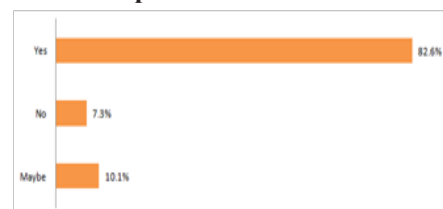
Chart 13: Is hand hygiene important in preventing the spread of the virus

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, two hundred and seventy-seven (87.7%) respondents said yes; eighteen (5.7%) respondents said No, and the rest twenty one (6.6%) respondents said maybe. Thus, the majority of the respondents' said yes, that is hand hygiene important in preventing the spread of the virus.

Chart 14: Wearing a mask help Prevent the Spread of the Virus

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, two hundred and sixty-one (82.6%) respondents said yes; twenty-three (7.3%) respondents said No, and the rest thirty-two (10.1%)

respondents said maybe. Thus, the majority of the respondents' said, Yes, that is wearing masks help to prevent the spread of the virus.

Chart 15: You know where to go if you Start Developing Symptoms

Source: Computed from Primary Data

Interpretation: The Chart shows, out of 316 respondents, two hundred and forty-seven (78.2%) respondents said yes; forty-one (13%) respondents said No, and the rest twenty-eight (8.9%) respondents said maybe. Thus, the majority of the respondents' said, Yes, that is, you should know where to go if you start developing symptoms.

Chi-Square Test

S. No	H_0 : Null-Hypotheses	Test Statistics	P Value	Accepted / Rejected
1.	Gender is not associated with Awareness about Corona virus	Chi-Square Test	.584	Accepted
2.	Gender and is not associated with source of information regarding COVID-19	Chi-Square Test	.201	Accepted
3.	Gender is not associated with hand hygiene	Chi-Square Test	.123	Accepted
4.	Education is not associated with Awareness about Corona virus	Chi-Square Test	.001	Rejected
5.	Education is not associated with source of information regarding COVID-19	Chi-Square Test	.291	Accepted
6.	Education is not associated with antiviral & antibacterial spray to protect yourself	Chi-Square Test	.001	Rejected
7.	Education is not associated with wearing a mask	Chi-Square Test	.001	Rejected

Sources: collected and computed through Questionnaire

Significant at 5% (P<0.05) - Rejected, Non-Significant at 0.05 - (P>0.05) - Accepted

Result of Hypothesis

1. The calculated chi-square value is greater than the table value, and the result is no sign at a 5% level. Hence, the null hypothesis is accepted.
2. The chi-square statistics the value is greater than the table value of gender and source of information regarding COVID-19, and the result is no sign at a 5% level. Hence, the null hypothesis is accepted.
3. The calculated chi-square value of gender and hand hygiene is greater than the table value, and the result is no sign at a 5% level. Hence, the null hypothesis is accepted.
4. The calculated Chi-square value is less than the table value, and the result is significant at a 5% level. Hence, the null hypothesis is rejected. There exists a significant association between Gender and awareness level of Coronavirus.
5. The calculated chi-square value of education and source of information regarding COVID-19 is greater than the table value, and the result is no sign at a 5% level. Hence, the null hypothesis is accepted.
6. The calculated Chi-square value is less than the table value, and the result is significant at a 5%

level. Hence, the null hypothesis is rejected. There exists a significant association between Education and antiviral & antibacterial spray to protect you.

7. The calculated Chi-square value is less than the table value, and the result is significant at a 5% level. Hence, the null hypothesis is rejected. There exists a significant association between Education and wearing a mask.

Conclusion

The Chinese government could have brought it under control at the earliest stage of the disease so negligent. Many countries are suffering much destruction today because of the Chinese government's indifference. Coronaviruses (COVID 19) has a huge impact on society and the economy. It takes at least three to five years to get a balanced economy. Moreover, Unemployment will become a big problem.

According to researchers, the impact of the disease is very difficult in the future, to prevent the spread of COVID-19 Clean your hands often. Use soap and water, or an alcohol-based hand rub, Maintain a safe distance from anyone who is coughing or sneezing, Don't touch your eyes, nose or mouth, Cover your nose and mouth with your bent elbow or a tissue when you cough or sneeze, stay home if you feel unwell, If you have a fever, cough and difficulty breathing, seek medical attention. Call in advance to follow the directions of your local health authority. Though we have enough awareness, we have to be very alert that we have to protect ourselves until we find preventive medicine.

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