



Knowledge, perception and practice towards COVID 19 among rural population

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Abstract

Question(s): What will be the knowledge, perception and practice level towards covid-19 among rural population of Loni?

Design: Descriptive Study.

Participants: Rural Population.

Intervention: Non- Interventional

Outcome measures: Questionnaire responses.

Results: A total 315 participants completed the survey. The main sources of COVID 19 information were television and social media. Majority of respondents shown a correct rate of knowledge (80%), Perception (54%) and Practice (66%) towards COVID 19.

Conclusion: The Study concludes, majority of the respondents shown a good knowledge and right practice towards COVID 19 Pandemic. Still there was a gap in right perception towards underlying myths and facts about COVID 19. Providing educational programs and circulating WHO myth busters through media or social networks can resolve underlying Misconceptions about COVID 19 and improves the Knowledge, Perception and Practices among Public.

Keywords: COVID 19, rural population, perception, practice

Introduction

The Ongoing global COVID 19 Pandemic has been characterized as global health Crises. SARS COV 2 outburst was declared as Pandemic by WHO on 11th march 2020, and, due to its alarming levels of diverge along the globe ^[1]. Coronavirus belongs to Coronaviridae family, have diameter 65 – 125 nm and contains a single strand of RNA with lengths ranging from 26-32kb. Muster of numerous types such as alpha, beta, gamma, SARS COV, H₅N₁ influenzae, H₁N₁ 2009 and MERS – COV ^[2]. Incubation period of COVID 19 is 2 -14 days, Common symptoms of COVID 19 encompass fever, Dry Coughing, Fatigue foremost to difficulty in breathing, speaking, progress from one place to another, Chest Pain. SARS – COV2 can spread through human-to-human transmission and indirect contact with defile objects, SARS COV 2 can be conyed through body fluids droplets from mouth or nose, which can spread when person with COVID 19 coughs, sneezes and talks. Droplets cannot cross more than 6 feet (2m). Several strategies are established to improve people's knowledge, perception and practice at National as well as Local level with the help of WHO. Among these strategies were the Shutdown of unnecessary businesses, public transportation, schools, colleges and universities, educating Population through publications, TV programs and Social media. Therefore, this study was conducted to determine the level of knowledge, attitudes, risk comprehension, and practices of adults about transmission, prevention, treatment, and following the news about COVID-19, by providing a policymaker's pieces of field-based evidence to help them in the management of this epidemic ^[6]. Regarding COVID-19, Government has imposed strict control measures to deal with this unparalleled situation to prevent the mortality rate from skyrocketing. Global Strategies like compulsory masks,

social distancing, use of shields, limiting public vehicle traffic and lockdown of the markets that do not dispense essential products ^[5]. Knowledge, Perception and Practice is an important Cognitive Key in Public health regarding health prevention and promotion. It involves range of benefits about causes of disease and exacerbating factors, identification of symptoms and available methods of treatment and Consequences. Beliefs about COVID 19 comes from different sources such a stereotype concerning similar viral diseases government information, social media and internet previous personal experiences and medical Sources. Accuracy of those beliefs may determine different behavior about prevention and could vary in population, in many cases absence of knowledge or if most of medical related beliefs are actually misconstructured or false, these may carry a potential risk. There are a limited number of studies on knowledge, Perception and practice during epidemics. However, SARS outbreak study concludes that knowledge, Perception and Practice towards syndrome are connected with other emotional reactions among population, which may proliferate attempts to prevent spread of disease. Since it is the novel coronavirus, its epidemiological characteristics of COVID are not well known till date and new studies and publications will take time to know and understand the level of knowledge, perception and practice. Objective of this Study is to understand Knowledge, Perception, practice of COVID 19 among rural population. Survey can collect information on what is known, believed and done by specific Rural Population.

The research questions were

What will be the Knowledge, perception and Practice Level towards COVID 19 among rural population of Loni?

Method

- **Study Setting:** Dr. A.P.J. Abdul Kalam College of Physiotherapy.
- **Study Type:** Descriptive Study
- **Sampling Method:** Purposive Sampling
- **Sample size:** 315
- **Participants:** Rural Population
- **Tools and Materials:** Tool-Pre-validated Questionnaire

Materials

1. Pen
 2. Paper
 3. Writing Pad
- **Outcome Measures:** Questionnaire responses
 - **Analysis:** Presentation Analysis of Score & Graphical Presentation
 - **Study Duration:** 6 months

Inclusion Criteria

- Residents of Loni Village
- Those who prefer English, Hindi, Marathi, language for communication
- Those who are willing to give informed consent

Exclusion Criteria

- Individuals who are not under any medical treatment, respiratory complications or any other chronic complications which can interrupt the participation in the study.
- The individuals who are residing in urban areas & temporarily staying in Loni
- Those individuals who are unavailable during study period.

Outcome Measures

Study was conducted to appraise knowledge, Perception and Practice towards COVID 19 among rural population. Based on the knowledge scores of the respondents, an overall correct rate of knowledge towards COVID 19 was 79%. Overall perception rate about COVID 19 in rural population was 53% and 65% of participants accepted to practice approximate behaviors to avoid spread of COVID 19. Hence, the study concluded that selected subjects were very well aware about COVID 19 and its spread, also they were following good practices as per the recommendations from authority and their perception about COVID 19 is also at fair level.

Data Analysis

Figure 1 depicts the sample size was drawn from a sample pool of 315 rural population residing at Loni village. The data analysis included the application of knowledge, Perception and Practice Questionnaire to all the subjects at PRH, Loni and was done manually by the examiner. The data analysis summarized the collected data, analytical and logical reasoning by mean and standard deviation, which

determined the patterns and interrelationships between the subjects, promoting derivation of conclusion.

To develop a conclusion, the outcome measure was determined by deriving the KPP Score, the entire data was configured and analyzed via percentage and graphical presentation augmenting the conclusion/inference which is been drawn.

Results

Knowledge about COVID 19

The mean COVID 19 knowledge score of the respondents was 7.9(SD 3.27778194) suggesting overall 79% correct rate of knowledge, more than 90% of the study participants were aware about name, origin of virus, incubation period, symptoms, people at high risk for serious Covid 19 illness, mode of transmission, prevention and control. However, only half of the participants are aware about COVID 19 cannot be transmitted through air. 21% participants are aware about that all infected persons not develop the symptoms and serious illness.

Perception about COVID 19

The mean COVID 19 perception Score of the respondents was 5.3(SD 19.01220064) suggesting overall 53% correct rate of perception more than three fourth of the participants had right perception regarding medication unavailability in global market (63.23) and COVID 19 is not transmitted by mosquito bite (61.74). half of the participant are in right perception about the real facts like, virus can transmit in hot and humid climate areas (50.32), hot bath cannot protect person from COVID 19 (52.56), hand dryers are not effective in killing Virus (60.58) pneumonia vaccine cannot protect COVID 19 (66.88) and antibiotics are not effective against COVID 19 (52.41) less than half of the participants are in right perception regarding spraying alcohol or chlorine all over the body can harm the skin and mucous membrane (34.29), eating garlic cannot prevent COVID 19 (39.81) and breath holding Test is not a right test to diagnose COVID 19 (43.27)

Practice towards COVID 19

The mean COVID 19 practice score of the respondent was 6.5(SD 24.65457914) suggesting overall 65% correct rate of practice. More than 90% of the participants had rational practices towards COVID 19 like staying at home (77.32), Elbow Sneezing (79.55), maintenance of physical distance (78.85) Hand hygiene (79.49) wearing mask (81.03), avoiding travel to COVID 19 affected areas (66.88), sanitization of surrounding areas (72.52) and avoiding shake hand (54.49) less than half of the participants were using Arogya Setu Application recommended by Government of India (41.80) and avoiding touch over eyes, nose, and mouth (61.74)

Research question 1: What will be the Knowledge, perception and Practice Level towards COVID 19 among rural population of Loni?

Table 1

Knowledge	True	False
Q1	82.32	17.68
Q2	77.78	22.22
Q3	82.22	17.78
Q4	78.98	21.02

Q5	75.16	24.84
Q6	84.98	15.02
Q7	79.37	20.63
Q8	76.43	23.57
Q9	75.72	24.28
Q10	81.85	18.15
Perception		
Q11	50.32	49.68
Q12	52.56	47.44
Q13	38.26	61.74
Q14	60.58	39.42
Q15	65.71	34.29
Q16	33.12	66.88
Q17	60.19	39.81
Q18	52.41	47.59
Q19	43.27	56.73
Q20	63.23	36.77
Practice		
Q21	77.32	22.68
Q22	79.55	20.45
Q23	78.85	21.15
Q24	79.49	20.51
Q25	81.03	18.97
Q26	66.88	33.12
Q27	72.52	27.48
Q28	41.8	58.2
Q29	45.51	54.49
Q30	38.26	61.74

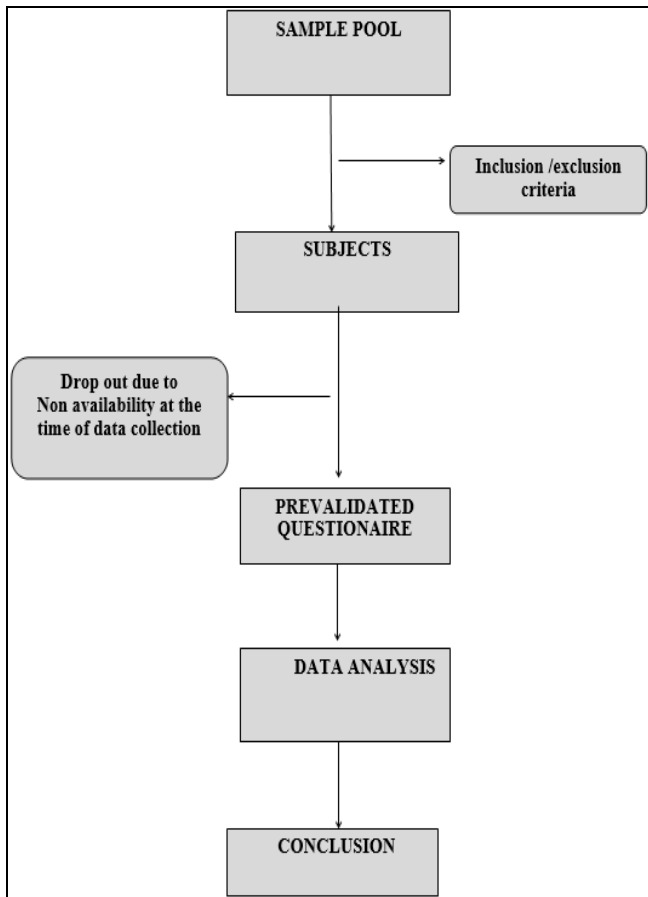


Fig 1: Flow Chart of Procedure of Data Analysis

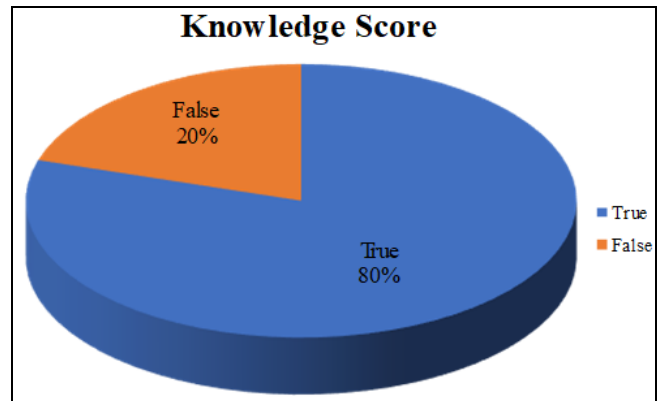


Fig 2: The mean COVID 19 knowledge score MEAn 7.9(SD 3.27778194)

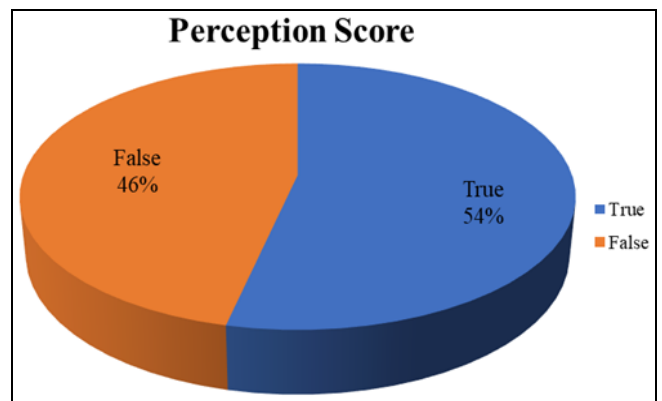


Fig 3: The mean COVID 19 perception Score 5.3(SD 19.01220064)

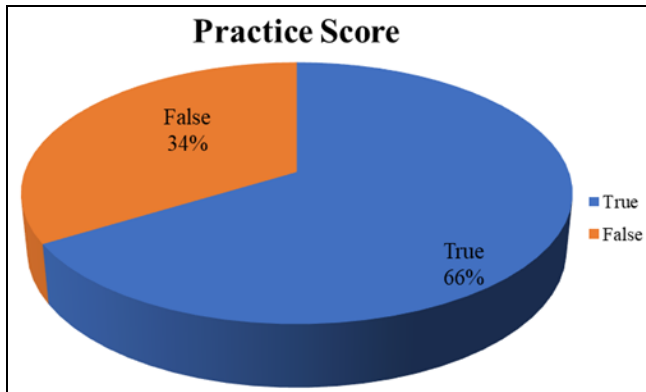


Fig 4: The mean COVID 19 practice score 6.5(SD 24.65457914)

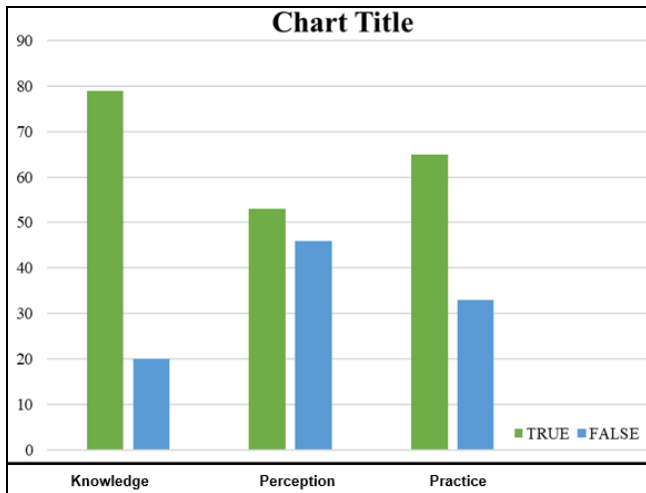


Fig 5: The above Diagram shows Knowledge, Perception and Practice Score of Rural Population towards COVID 19

Discussion

The present study was conducted to appraise knowledge, Perception and Practice towards COVID 19 among rural population. The study was inaugurated within a period of three months from January to March 2021. The subjects were selected of rural population of Loni. The major sources of COVID 19 figures were in television and social media for our subject population. There were similar studies accompanied among general public in India [1].

Based on the knowledge scores of the respondents, an overall correct rate of knowledge towards COVID 19 is 79%. The high rate of knowledge about COVID 19 among respondents is due to wide initiative of countrywide lockdown taken by Government of India which is reflected in people taking good preventive measures to protect themselves from disease as well as break the chain of conduction and media for integrating public awareness about COVID 19 from start of outbreak. In the study, poor knowledge was reported about virus conduction and risk of getting serious COVID 19 illness.

The study explored Public comprehension among myths and facts about COVID 19. A right comprehension towards myths and facts about COVID 19 can encourage good practices among rural population. The overall perception rate about COVID 19 in rural population is 53%. In the initial COVID 19 outbreaks, there was not much awareness regarding Precautions and management in Rural Population, but gradually as pandemic worsened Government executed strict norms. Television and Social Media were the right sources to communicate COVID 19 myth busters. Rural

population was made aware about precautions through various advertisements, caller tunes and banners everywhere. Wearing mask is made mandatory with legal implications along with maintaining proper hygiene. Sanitization also played important role along with avoiding social gatherings. All these measures made people attentive towards COVID 19 management and their health safety later the cost of the mask and sanitizers was reduced, so that Rural Population can afford it. People were not allowed to travel longer distances and if they do so, screening for COVID 19 was made mandatory from place to place by authorities. People breaking COVID 19 norms like, not wearing mask properly or not maintaining social distancing were charged fine, by which they became more cautious regarding precautions and hygienic measures for preventing spread of COVID 19.

In the Study, 65% of participants accepted to practice approximate behaviors to avoid spread of COVID 19. This may be due to vast broadcasting about COVID 19 by Government of India and good knowledge of respondents. Mobile Application Arogya Setu has helped connecting people to health Services of India to fight against COVID 19. In study only 41% of respondents are getting COVID 19 information and services from this application. Still there is need to promote awareness on use of Arogya Setu application among rural population. Rural population was affected the most during the Pandemic. They faced several problems first and foremost things among most of the rural population work on daily wages, so due to lockdown they had no source of income. Schools were shut and online classes were held, so students settled in rural population didn't have any access to online classrooms. Government hospitals were mostly filled and didn't have vacant beds or rooms for below poverty line patients. Financial crises due to lockdown and loss of occupation were also major aspect of pandemic. Universal practices were adopted by rural population once they were educated about it. The Various effects of COVID 19 are seen on the world. The deficiency of information, the need for accurate information, and the rapidity of its dissemination are important, as this pandemic requires the cooperation of entire population.

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