Medical Science

Knowledge, risk perception and precautionary actions taken by residents regarding COVID -19: An online cross sectional survey

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ABSTRACT

Introduction: COVID-19 is probably the most recent example of an unavoidable illness the world is facing. The basic knowledge regarding the disease affects the perception of risk of acquiring the illness and using precautionary practices to prevent it. *Objective:* Study was done with an aim to assess the basic knowledge, risk perception and preventive precautions used by the residents regarding COVID-19. *Method:* An online cross sectional survey was done on 328 residents selected via convenience sampling. Tools used were questionnaire to assess knowledge, Risk perception Scale and questionnaire to assess preventive actions. Tools for data collection were sent to the participants using WhatsApp or email. *Result:* Regarding knowledge, 60.4% (198) of the residents had moderate knowledge; 36.6% participants had adequate knowledge and 3% were having poor knowledge. Regarding Risk perception, 15.5% participants perceived that they are at no risk of having COVID 19 and 32.0% perceived high risk of having COVID 19 as compared to HIV/AIDS for which 7.9% participants perceived no risk of acquiring HIV/AIDS and 68.6% participant reported high risk of acquiring HIV/AIDS. Majority of residents took measures to prevent the spread of Covid-19. *Conclusion:* Having moderate to adequate knowledge led the participant to follow necessary precautionary actions and thus prevent getting infected with COVID -19. So, we can say that equilibrium is maintained and there is no dread of COVID -19. This level of knowledge also led the residents to practice most of the preventive actions in their day to day life to prevent COVID -19 infections.

Keywords: Knowledge; Risk Perception; Precautionary Actions, Residents, COVID-19

DISCOVERY SCIENTIFIC SOCIETY

1. INTRODUCTION

The pneumonia that began in Wuhan, China transformed into pandemic as it tainted in excess of 4088 848 individuals in more than 114 nations by May 12,

2020 with 82591 new cases. The present loss of life is at 283153 all-inclusive as of May 12, 2020 (Coronavirus disease situation report 113, 12th May 2020). COVID-19 is probably the most recent case of a rising irresistible illness standing up to the world. Episodes of sicknesses like these are relied upon to repeat, and they may quickly spread over the globe. Measures to control flare-ups incorporates not just distinguishing new life forms, developing antibodies, and starting appropriate treatments, in addition it also very importantly needs satisfactorily advising the general population about dangers and safeguards. The general population might be hopeful when recognizable dangers are seen to be to a great extent under volitional control; cynicism, prompting mass frenzy here and there, is more probable an aftereffect of seeing wild dangers (Weinstein, 1998; Slovic, 1987; Sjoberg, 2000). People who see themselves to be in risk for COVID-19 may take part in prudent conduct; however they may likewise trash the individuals who are seen as potential hotspots for this infection (Maunder, 2003). To advance reasonable hazard discernments and successful precautionary practices, communication of information to the public through different data sources is fundamental (Eiser, 1998; Fischhoff, 1993).

COVID -19 is known to be transmitted through droplet and close contact with the infected person including fomites. The MERS episode in Korea was started through contact with tainted individuals inside clinics. Since the contamination spread to different locales through patients who moved to clinics in different areas, individuals were additionally worried about the spread of the disease to their networks. As the dread of visiting medical clinics and worries about the chance of transmission to networks developed, the flare-up brought about a bigger social effect than the H1N1 flu flare-up that brought about the infection of 15,160 individuals and 260 fatalities in 2009.

Use of disease appropriate health behaviour practiced by the general public depends on the risk perception of a disease. Higher risk perception of an infection will in general lead to changes in their health practices and incites the act of preventive practices, which go about as elements to control the spread of disease episodes (Korea Centers for Disease Control and Prevention Middle East Respiratory Syndrome information, 2015; Tang, 2004; Rosenstock et al., 1994). On the contrary, inordinate dread of disease causes pointless social expenses (Kinsman, 2012). So as to guarantee that there is a proficient reaction to the episode of irresistible illness, it is important to achieve a harmony between the continuation of day to day life and the act of preventive practices, through a specific degree risk perception.

Considering past irresistible ailments episodes, including severe acute respiratory syndrome and the H1N1 flu, a few investigations have been performed to survey the connection between the impression of residents about the outbreak and their act of preventive practices (Leung, 2003; Lau et al., 2003; Kim et al., 2010; Kim et al., 2009). Conversely, just a couple of studies have been led to evaluate the impression of community inhabitants following the ongoing COVID -19 flare-ups. Comparable investigations, albeit constrained, have been performed on individuals that were isolated or medical staffs, following the MERS episode (Mackay et al., 2015; Phillips et al., 2014). We talk about COVID-19 that very few studies have been conducted to assess the imprint of general public regarding this pandemic. Along these lines, in this study, the researchers tried to assess the basic knowledge, risk perception and preventive actions done by residents during the 2020 outbreak of COVID-19 in India.

Statement of the problem

Knowledge, risk perception and precautionary actions taken by residents regarding COVID -19 – an online cross sectional survey

Objectives

To assess the basic knowledge of residents regarding COVID -19

To assess the risk perception of residents regarding COVID -19, other selected diseases, accidents etc.

To determine various precautionary actions taken by residents regarding COVID-19 pandemic

2. METHOD

An online Cross sectional survey design was employed for the study keeping in mind precautions regarding safe distancing. This was carried out in various states of India by preparing an online survey on Google sheet. Study Population consisted of all Indian residents above 18 years of age. Study Sample comprised all Indian residents above 18 years of age having email account or What Sapp account, had smartphone and access to internet. Snowball sampling technique was used to select the sample. Sample size of around 350 residents was predicted to enrol in study. Google form was sent to around 1000 residents and only 333 people responded back. After checking for completion of information 328 were finalized. The Study was done in the year 2020 and data collection period was 26th April to 29th June'2020 using an online Google form. Ethical permission was taken from the ethical committee of the University.

Inclusion Criteria

Indian Residents of at least 18 years of age.

Adult residents who are willing to participate in study

Adult residents who have internet connectivity, email account, WhatsApp account and smartphone

Adult residents who are able to understand the content of questionnaire

Exclusion criteria

Adult residents who are not willing to participate in study

Adult residents who don't have internet connectivity, smartphone, email account or WhatsApp account

Residents who are not able to understand the content of questionnaire

Development of Research Tool

Tools were prepared utilizing the following sources:

An extensive review of relevant literature related to study.

Self- observation of present situation

Consultation with experts from nursing practice, nursing education and related field

Tools for Data Collection

Knowledge Questionnaire was used to assess basic knowledge of residents regarding COVID 19. Self-reported Likert scale to assess risk perception of residents regarding COVID-19, selected diseases and accidents. Questionnaire to assess self- reported precautionary actions taken by residents regarding COVID 19 pandemic. All tools were prepared using Google form using convenience sampling technique finally online survey link via google link was sent to all the eligible participants with the help of email id or WhatsApp. The subjects were asked to give consent for survey by answering Yes or No for their willingness to participate in survey. Descriptive statistics as well as inferential statistics was used analysing the research results. Calculations were carried out using Microsoft Excel and SPSS. Permission was sought from Departmental Resaerch Committee, Faculty of Nursing, SGT University. Ethical Clearance was taken from ethical committee of SGT University. An informed consent was taken from the study participants before responding the survey questions and they were given full autonomy to take decision for the participation in the research.

3. RESULT AND DISCUSSION

Figure 1 shows the distribution of participant gender wise, 55% (180) were female and 45% (148) male participants. Figure 2shows the education status of the participants; in that 36.30% (119) were graduate, 30.5% (100) were post graduate 26.2% (86) were 10+2, 3.7% (12) were other and 3.4% (11) participants having PhD. Figure 3 Depicts that majority of 52.4% (172) were students 17.1% (56) were working is a private service, 15.9% (52) were working in Health and allied health sciences sector, 4.3% (14) were having other occupations, 3.4% (11) were self-employed, 3.0% (10) were working in Govt. Job, 2.1%(7) were unemployed and 1.8% (6) participants were home maker. Figure 4 shows the distribution of participants in zone wise, majority of 73.8% (242) participants from North zone, 18.3% (60) were belongs to West zone, 6.1% (20) from South zone, 1.2% (4) from East zone and only 0.6% (2) from Central zone.
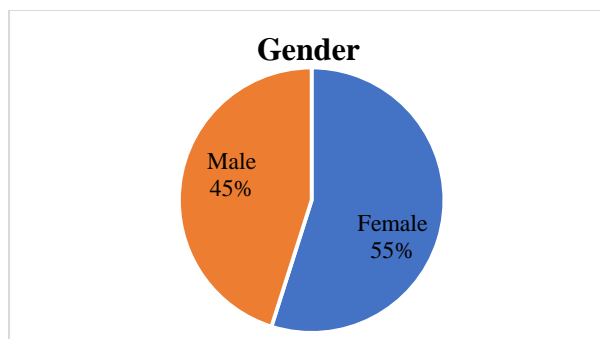

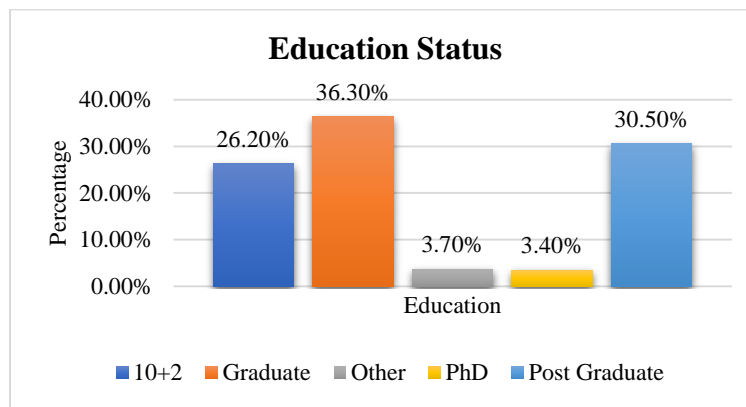**Figure 1** Gender Wise Percentage Distribution of Participants

Figure 2 Percentage Distribution of Participants according to Educational Status
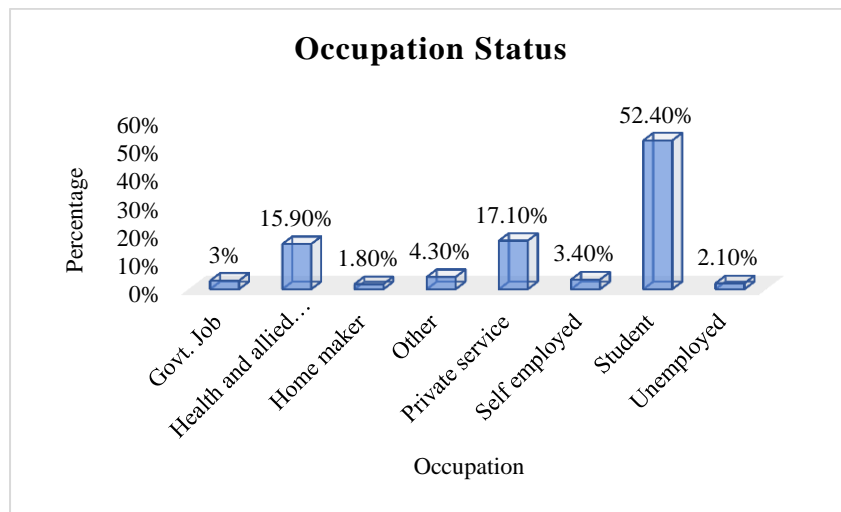

Figure 3 Percentage Distribution of Participants according to Occupational Status
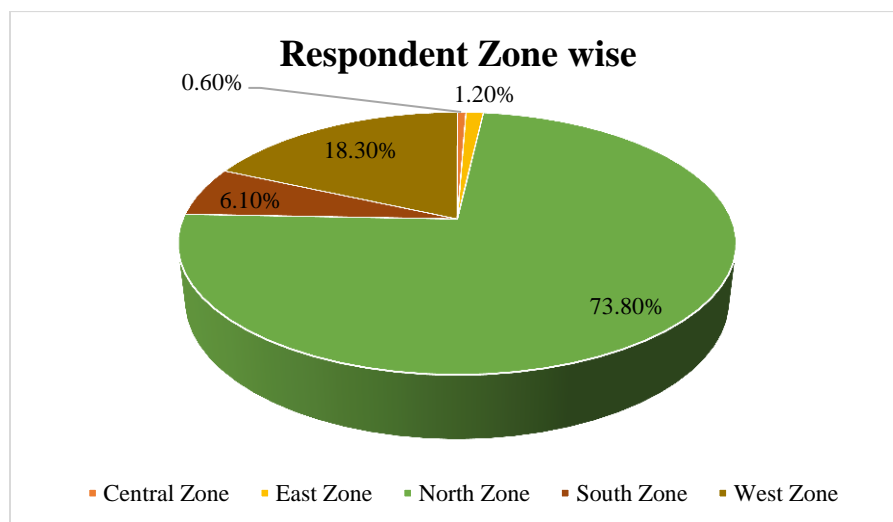

Figure 4 Zone Wise Percentage Distributions of Participants

Figure 5 shows the Knowledge level of the participants, 60.4% (198) having moderate knowledge, 36.6% (120) participants having adequate knowledge and 3% (10) were having poor knowledge. The result shows that 8.0213 are the mean score with mean percentage 80.213% and SD 1.19485. (Muruganandam, 2020) conducted a cross-sectional telephonic survey on relationship between awareness and impact of COVID 19 among 132 patients with severe mental illness. These patients had stable general condition before the COVID-19 pandemic. Data was collected using a self- reporting interview schedule containing 23 questions regarding

awareness of COVID-19 and their therapeutic status was collected from the patients and their caregivers. Around 10% of patients were entirely ignorant of the continuing COVID-19 pandemic.

Nearly 75% of patients were not bothered about getting infected with COVID-19 and had dearth of information regarding recognizing symptoms of this acute illness. More than 60% of patients were devoid of satisfactory information of preventive activities to control COVID 19. Every fifth patient had deficit of awareness of the method of transmission and he discontinued with management of his psychiatric illness. It was also seen that during lock down period, around one third of patients reported relapse of manifestations during this lockdown period. Multivariate regression analysis revealed that patients from economically and socially weaker sections of society with socioeconomic status and low literacy levels, with insufficient community help had comparatively little information related to COVID-19. Mental health services which aim the sesusceptible people during early catastrophe lessen the encumbrance to the public. The study findings aligned with the result of the present study.
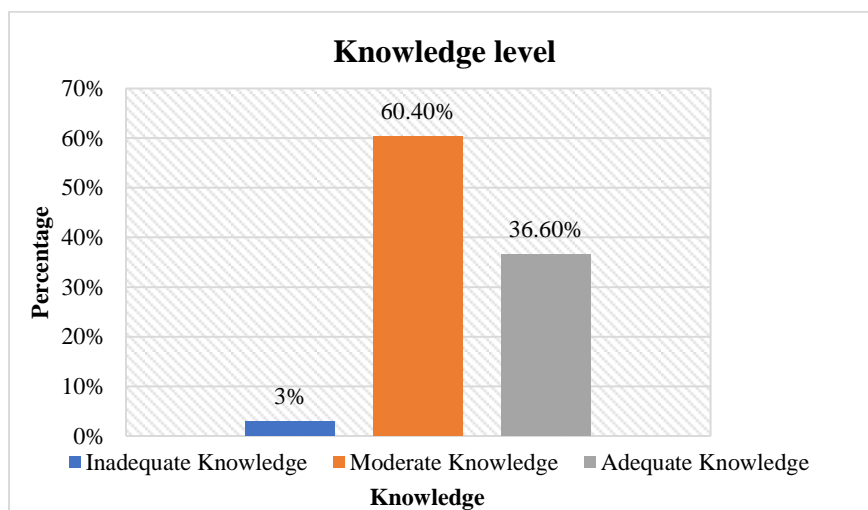

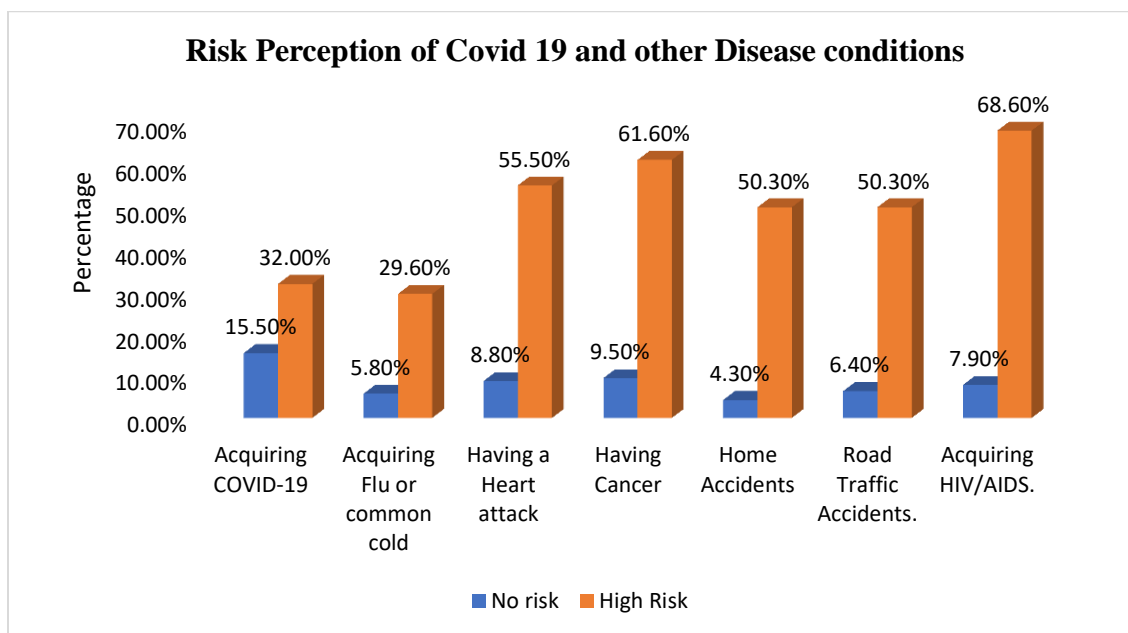**Figure 5** Percentage distributions according to Knowledge Level of participants

Figure 6 Risk Perception of COVID 19 and other Disease conditions

Figure 6 shows at what extent the participant felt at risk of being affected by Covid - 19. 15.5% (51) participants perceived that they are at no risk of having Covid 19 and 32.0% (105) perceived high risk of having COVID 19; 5.8% (19) participants says that they are at no risk of acquiring flu or common cold and 29.6% (97) perceived high risk; 8.8% (29) participants says that they are at no risk of having heart attack and 55.5% (182) perceived highest risk of heart attack, 9.5% (31) participants reported having no risk of

cancer and61.6% (202) participant reported high risk of having cancer; 4.3% (14) participants perceived no risk of home accidents and 50.3% (165) participant perceived highest risk of home accidents;6.40% perceived no risk of that no risk of home accidents, 6.4% (21) perceived no risk of road traffic accidents and 50.3% (165) participant perceived highest risk of road traffic accidents, 7.9% (26) participants perceived no risk of acquiring HIV/AIDS and 68.6% (225) participant reported high risk of acquiring HIV/AIDS.

Kuang et al., (2020) conducted a study on people's awareness of COVID-19 symptoms, risk perception, and changes in behaviors and stress levels during the lockdown in peri-urban Tamil Nadu India. Field workers led phone call survey on 2044 residents from 26 communities was conducted from 20th-25th May 2020. Around two thirds of participants considered zero risk of getting infected with coronavirus whereas nearly one fourth had minimum level of risk perception of contracting the disease COVID-19. General dreads found were connected to health and financial worries, including loss of pay (62%), incapability to travel without restrictions (46%), and getting infected (46%). People were cognizant of the general manifestations of COVID-19, namely rise in body temperature (66%) and non- productive cough (57%), but were not well aware of the spread of infection in the absence of symptoms (24%). Most of the people underwent higher level of stress about money (79%) and the isolation (51%). Outcomes highlighted the necessity to start relevant instruction and transmission program to increase observance about spread of infection even when there are no symptoms and to withstand precautionary practices.
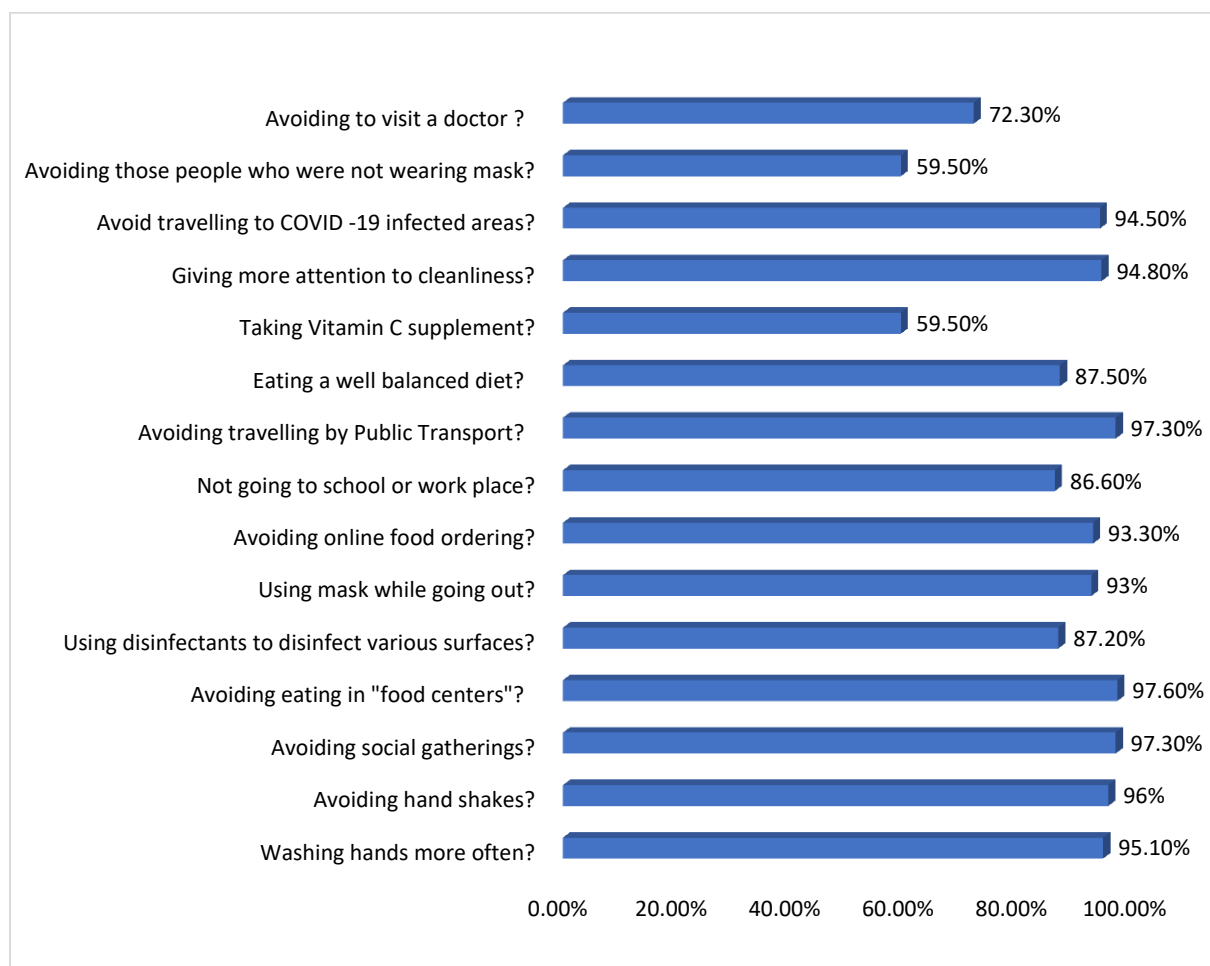

Figure 7 Actions taken to inhibit the transmission of COVID-19

Figure 7 shows that majority i.e., 95.1% (312) participants wash their hands more often, 96% (315) participants avoided hand shake, 97.3% (319) participants avoided social gathering, 97.6% (320) participants avoided eating food in canteen, 87.2% (286) participants used disinfectants to disinfect various surfaces, 93.0% (305) participants used the mask while going outside, 93.3% (306) participants avoided ordering online food, 86.6% (284) participants were not going to school or work place, 97.3% (319) participants avoided travelling by public transport, 87.5% (287) participants had a balanced diet, 59.5% (195) participants were taking vitamin C supplement, 94.8% (311) participants gave more attention to cleanliness, 94.5% (310) participants avoided travelling to Covid 19 infected area, 59.5% (195) participants avoided those people who were not wearing mask, 72.3% (237) participants avoided visit to a doctor.

Güner, (2020) wrote an article on Covid-19 highlighting on Prevention and Management measures in community. In this article the researchers quoted that on January 30, 2020, the WHO proclaimed the COVID-19 episode a general well being crisis of worldwide concern and, in March 2020, portrayed it as a pandemic to signify the magnitude of the circumstance and urge all nations to make a move in recognizing disease and forestalling spread. Shockingly, there is no drug that has been supported by the FDA, gone through controlled trials and exhibited a negative impact on the spread of this on-going worldwide. Only and only preventive actions are the most robust and efficacious defences that humanity has to counter this microorganism. The most important actions in ending the spread of this infection are hand cleanliness, social distancing and quarantine. With expanded testing limit, identifying more COVID-19 positive patients locally will likewise empower the decrease of optional cases with stricter quarantine rules.

4. CONCLUSION

This study concludes that most of the participant had moderate level of knowledge. Risk perception regarding COVID -19 was not very high. Very few participants perceived no risk of COVID -19 at all as compared to HIV/AIDS where 68.6% (225) participant reported high risk of acquiring HIV/AIDS. Having adequate knowledge led the residents to follow most of the preventive actions like wash their hands avoid hand shake, avoid social gathering, avoid eating food in canteen, 87.2% (286) participants use disinfectants to disinfect various surfaces, 93.0% (305) participants used the mask while going outside, avoid travelling by public transport, Taking Vitamin C, wearing mask all the time and avoiding doctor's clinic and people not wearing the mask was followed least by the participants. Having moderate knowledge led the participant to follow these necessary precautionary actions and thus prevent getting infected with COVID -19. So, we can say that equilibrium is maintained and there is no dread of COVID -19 and also most of the preventive actions are practiced by the general public in their day to day life.

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