

## Research Article

## General public Knowledge, Attitude and Practices Regarding COVID-19: a Cross-Sectional study in Himachal Pradesh

Dr. Hanish Kumar Rana<sup>1</sup>, Miss Riya Katoch<sup>2</sup> and Dr. Badal Katoch<sup>\*3</sup><sup>1</sup>Dr. Hanish Kumar Rana, Medical Officer, MD Physiology, IGMC Shimla, Himachal Pradesh, India<sup>2</sup>Miss Riya Katoch, MSc Psychology, School of Education, Desh Bhagat University, Punjab, India<sup>3</sup>Dr. Badal Katoch, Junior Resident, MD Physiology, IGMC Shimla, Himachal Pradesh, India\*Corresponding Author  
DR. BADAL KATOCH

## Article History

Received: 20.06.2022

Accepted: 30.06.2022

Published: 10.07.2022

## Citations:

Hanish Kumar Rana, Miss Riya Katoch & Badal Katoch. (2022): General public Knowledge, Attitude and Practices Regarding COVID-19: a Cross-Sectional study in Himachal Pradesh. *Hmlyan Jr Nur Mid*, 1(4), 10-14

**Abstract:** **Background:** COVID-19 has caused around a million deaths throughout the world and despite the prompt lockdown and rigorous efforts from the government and health authorities, the case numbers in India were still staggering. To explore this furthermore, our study was formulated and aimed to evaluate the Knowledge, Attitude and Practices Regarding COVID-19 among General Population of Himachal Pradesh. **Material & Methods:** This cross-sectional survey of residents of the state of Himachal Pradesh was carried out between March 2021 and May 2021 using Google forms. Until 400 replies were gathered, the questionnaire was distributed among state citizens in both rural and urban areas via email and social media sites such Whatsapp groups, Facebook, Instagram, and LinkedIn. We collected data on their socio-demographic traits and Knowledge, Attitude and Practices regarding COVID-19. Epi info v7 software was used to evaluate the data using the necessary statistical tests. **Results:** A total of 400 respondents including 150(37.5%) were from urban area and 250(62.5%) were from rural area were participated in the study. Among the participants of the majority 268(67.0%) were males, 182(45.5%) were between 18-30 years, 152(38.0%) were Graduate, 254 (63.5%) were employee, 247(61.75%) were married and 383 (95.75%) were Hindu. In the present study 121 (30.25%) study participants had very good (24-30 marks) awareness regarding COVID-19, 208 (52.0%) had good (18-23 marks), 49 (12.25%) had fair (12-17 marks) and 22(5.5%) had poor (<12 marks) awareness regarding COVID-19. **Conclusion:** According to survey findings, the general public had either satisfactory knowledge Attitude and Practices Regarding COVID-19. It is evident from our study that better knowledge leads to a positive attitude and in turn reflects on better practice. Our study also revealed how education can be an effective tool in awareness and timely adaptation which might help health authorities to formulate plans based on the areas of improvement.

**Keywords:** Knowledge, Attitude, Practices, COVID-19, General Population, Himachal Pradesh.

## INTRODUCTION

COVID-19 is a highly contagious infection that spreads through human to human contact causing serious health problems within communities. Depending upon the immune system of an individual it can cause symptoms ranging from mild to severe. Symptoms identified comprise of fever, cough, difficulty in breathing, loss of smell, while in extreme cases can lead to pneumonia, multi-organ failure and death.<sup>1-3</sup>

The rapid spread of this infection is principally through respiratory droplets of 5-10 µm in diameter, spread through the mouth or nose, when an infected person coughs or sneezes. It is of great importance for the general public to have appropriate awareness regarding the signs and symptoms and the causative factors of this disease and preventive protocols that need to be followed, including social distancing, following proper hand hygiene protocol and use of face masks.<sup>4-7</sup>

A number of studies have done in different parts of the India on knowledge on COVID-19 but such studies are limited in hilly state of Himachal Pradesh having different type of customs and cultural pattern. Therefore, this study was undertaken to analyze the level of Knowledge, Attitude and Practices Regarding COVID-19 of the general public of Himachal Pradesh using an online survey.

### Objectives of the Study

To evaluate the Knowledge, Attitude and Practices Regarding COVID-19 among General Population of Himachal Pradesh

## RESEARCH METHODOLOGY

- Research Approach -Descriptive
- Research Design- Cross-sectional survey design
- Study area: Hilly state of Himachal Pradesh
- Study duration- between March 2021 to May 2021
- Study population: All adults above 18 years of age who were staying in the Himachal Pradesh for 12 months or more.
- Sample size- 400 Adults assuming 50% have adequate knowledge regarding COVID-19, 5% absolute error, 95% confidence level, and 5% non response rate.
- Sampling Technique- convenience & snowball Sampling technique
- Study tool: A google form questionnaire consisting of questions regarding socio-demography, Knowledge, Attitude and Practices Regarding COVID-19 was created. The questionnaire was initially pre-tested on a small number of people to identify any difficulty in understanding by the respondents.
- **Description of Tool-**
  - a) Demographic data survey instrument: The demographic form elicited information on participants' background: age, gender, marital status, religion, employment, education and many more.
  - b) Questionnaire: The questionnaire contains 30 structured closed ended questions regarding Knowledge, Attitude and Practices Regarding COVID-19. The participants have to choose right option. One mark was given for each correct answer and zero for incorrect answer. The maximum score was 30 and minimum score was zero. Scoring was done on the basis

of marks as >80%(24-30)=very good,60-79%(18-23) =Good,41-59% ( 12-17)=Fair,<40% (< 12)=poor

- Validity of tool - by the experts in this field
- Inclusive Criteria- who were willing to participate in the study.
- Exclusion Criteria: who were not willing to participate in the study
- Data collection- Data was collected under the guidance of supervisors. The google form questionnaire was circulated via online modes like e-mail and social media platforms like Whatsapp groups, Facebook, Instagram and LinkedIn in both rural and urban area of Himachal Pradesh till the 400 responses were collected. Responses were then recorded in a Google Excel spreadsheet.
- Data analysis- Data was collected and entered in Microsoft excel spread sheet, cleaned for errors and analyzed with Epi Info V7 Software with appropriate statistical test in terms of frequencies and percentage.
- Ethical Considerations- Participants confidentiality and anonymity was maintained.

## RESULTS

The present study was cross sectional descriptive study carried out to evaluate the Knowledge, Attitude and Practices Regarding COVID-19 among the general population of Himachal Pradesh.

A total of 400 respondents including 150(37.5%) were from urban area and 250(62.5%) were from rural area were participated in the study. Among the participants of the majority 268(67.0%) were males, 182(45.5%) were between 18-30 years, 152(38.0%) were Graduate, 254 (63.5%) were employee, 247(61.75%) were married and 383 (95.75%) were Hindu.

**Table-1:** Socio-demographic characteristics of study participants

Socio-demographic Variables		Frequency	Percent
Area	Urban	150	37.5
	Rural	250	62.5
Gender	Males	268	67.0
	Females	132	33.0
Age	18-30	182	45.5
	31-40	118	29.5
	41-50	51	12.75
	51-60	36	9
	61-70	13	3.25
Education	Graduate	152	38
	Intermediate	109	27.25
	Matriculate	62	15.5
	Middle	35	8.75
Occupation	Post Graduate	42	10.5
	Employed	254	63.5
	Unemployed	146	36.5
Marital status	Married	247	61.75
	Unmarried/ Divorce	153	38.25

<b>Religion</b>	<b>Hindu</b>	383	95.75
	<b>Muslim</b>	6	1.5
	<b>Sikh</b>	3	0.75
	<b>Others</b>	8	2
<b>Total</b>		400	100

**Table-2: Knowledge, Attitude and Practices Regarding COVID-19**

<b>S.No.</b>	<b>Knowledge of the responders regarding COVID-19</b>	<b>Correct Response</b>	<b>Percent</b>
1.	What are the common symptoms of COVID-19?	308	77
2.	Who are more likely to have a severe form of COVID-19?	234	58.5
3.	COVID-19 virus spreads through small droplets expelled from nose or mouth when an infected person coughs, sneezes or speaks	255	63.75
4.	People who are COVID-19 positive but do not have symptoms cannot spread the virus.	256	64
5.	Patients who have COVID-19 need not wear a mask to prevent the disease from spreading.	287	71.75
6.	Covering our mouth and nose with bent elbow or tissue while coughing or sneezing can reduce the virus spread.	324	81
7.	Washing your hands with soap and water can kill the virus.	298	74.5
8.	Social distancing will help prevent the spread of COVID-19.	270	67.5
9.	Children and adolescents cannot be affected by COVID-19.	212	53
10.	There are proven vaccine or drug against COVID-19 in India.	346	86.5
11.	Time between exposure to COVID-19 virus and noticing symptoms can range from 1-14 days.	211	52.75
12.	COVID-19 virus cannot survive on surfaces like doors, doorknobs, plastic bags etc.	209	52.25
<b>Attitude of the responders regarding COVID-19.</b>			0
13.	Health care workers are taking necessary steps to fight COVID-19.	324	81
14.	Do you think washing hands with soap and water will help in preventing the transmission of COVID19?	299	74.75
15.	Do you think covering the mouth and nose while coughing or sneezing by using a tissue or with elbow will help in reducing the transmission of COVID-19?	322	80.5
16.	Do you think the practice of keeping a certain distance from other people while going outside will help in preventing the transmission of COVID19?	272	68
17.	Do you think taking home remedies or immune-boosting foods will protect you against COVID-19?	301	75.25
18.	Do you think it is important to protect the elderly (60 years and above) from COVID-19?	257	64.25
19.	India can win the battle against COVID-19 virus	315	78.75
<b>Practice of the responders regarding COVID-19.</b>			0
20.	Do you wear a face mask while going outside, after the COVID-19 pandemic has started?	318	79.5
21.	Do you practice social distancing from other people while being outside?	269	67.25
22.	While coughing and sneezing do you cover your mouth and nose with a tissue or elbow?	324	81
23.	Do you take any measures to protect the elderly (60 years and above) from COVID-19?	287	71.75
24.	Do you disinfect your belongings and clean your house?	216	54
25.	Do you regularly wash your hands after COVID-19 pandemic has started?	327	81.75
26.	What mask do you wear while going outside?	346	86.5
27.	When you are out and wearing a mask, do you pull down your mask for any reason / reasons?	319	79.75
28.	Are you currently taking any home remedies or immune-boosting foods to protect against COVID-19?	325	81.25
29.	Have you engaged yourself in physical activities after COVID-19 pandemic has started?	265	66.25
30.	Do you update yourself regularly about COVID-19?	348	87

**Table 3:** Awareness regarding COVID-19 among study participants

Category (Marks)	Awareness regarding COVID-19 ( n=400)	Percent
V. Good (24-30)	121	30.25
Good (18-23)	208	52
Fair(12-17)	49	12.25
Poor(<12)	22	5.5
<b>Total</b>	400	100

In the present study 121 (30.25%) study participants had very good (24-30 marks) awareness regarding COVID-19, 208 (52.0%) had good (18-23 marks), 49 (12.25%) had fair (12-17 marks) and 22(5.5%) had poor (<12 marks) awareness regarding COVID-19.

## DISCUSSION

The respondents for this online statewide cross-sectional survey conducted in the Himachal Pradesh primarily comprised young adults, males and educated individuals.

In the present study, respondents had sufficient knowledge regarding the prevention and control of COVID-19; however, their knowledge in terms of clinical presentations and COVID-19 transmission modes was needed further improvement. The respondents were optimistic about the control of COVID-19. Even though wearing a mask is mandatory still many respondents admitted that they did not wear a mask when leaving home and many others didn't follow the standard precautions against COVID-19. But overall, the general public of Himachal Pradesh had either satisfactory knowledge Attitude and Practices Regarding COVID-19.

Similarly in the study done by Beenish Fatima Alam *et al.*,<sup>1</sup>, most of the participants (70%) claimed that they have good knowledge of novel COVID-19 disease. Mean knowledge score was  $9.48 \pm 2.88$  out of 16, which can be considered as good knowledge about the disease. Figure 1 shows the correct answer percentages of knowledge questions asked: 83% had awareness regarding the quarantine time; 82% used face masks whenever they left their homes; 98% were aware of the origin of the disease; fever and difficulty of breathing were correctly described as most common symptoms by 70%; 69% correctly stated that the disease can be transferred by touching each other or infected surfaces; and 21% stated that transmission of disease could be through running nose and aerosol. Another study by Dkhar *et al.*,<sup>2</sup>, showed that the respondents have exhibited good knowledge, positive attitude and sensible practices regarding covid-19 during the pandemic.

Unlike in the early stage of the COVID-19 pandemic, our study found that sound knowledge has led to little improvement in attitude or practices during this time. Therefore, health education should focus on promoting a positive attitude and better practices in the public. For example, the public should be encouraged to adopt the correct attitude towards practices that can

prevent COVID-19.<sup>8,9</sup> Their knowledge of the practices should also be enhanced and the rationale for the 3Cs and 3Ws more clearly explained.<sup>10</sup> Greater emphasis should be placed on vulnerable groups such as young adults, males, and unmarried individuals as well as less-educated people, lower-income groups, and individuals from rural areas. In short, this study provides timely insights for the government and public health organizations to establish more appropriate policies and interventions for combatting COVID-19.

## Limitations

The sample size and duration of the study are restricted to 400 respondents and 3 months in time; thus, the scope and extent of the conducted research might be minimized. It's a convenience sample through social media, which has its own limitations. Social media statistics are dynamic and can change according to its popularity and due to specific group of users being educated and having access to that information. This is the reason most of the participants were graduates and above. This survey was conducted only in one state of India, and hence, these findings cannot be generalized all over India. Future work should focus on a larger, national representative sample population.

## CONCLUSION

According to our survey findings, the general public had either satisfactory knowledge Attitude and Practices Regarding COVID-19. It is evident from our study that better knowledge leads to a positive attitude and in turn reflects on better practice. Our study also revealed how education can be an effective tool in awareness and timely adaptation which might help health authorities to formulate plans based on the areas of improvement. Further knowledge and awareness should be promoted.

## REFERENCES

1. Alam BF, Almojaibel A, Ansari KA, Haroon M, Noreen S, Tauqir S, Almas K, Farooqi F, Ali S. General public awareness, knowledge and attitude toward COVID-19 infection and prevention: A cross-sectional study from Pakistan. *F1000Research*. 2021 Sep 21;10(946):946.
2. Dkhar SA, Quansar R, Saleem SM, Khan SM. Knowledge, attitude, and practices related to COVID-19 pandemic among social media users in J&K, India. *Indian Journal of Public Health*. 2020 Jun 1;64(6):205.
3. Kanagavelu AK. Knowledge, attitude and practice towards COVID-19 among the general public in

- Tamil Nadu, India. *Int J Community Med Pub Health*. 2021 Apr;8(4):1935-44.
4. Andrews MA, Areekal B, Rajesh KR, Krishnan J, Suryakala R, Krishnan B, Muraly CP, Santhosh PV. First confirmed case of COVID-19 infection in India: A case report. *The Indian journal of medical research*. 2020 May;151(5):490.
  5. Ministry of Health and Family Welfare, Government of India. COVID-19 Dashboard. <https://www.mohfw.gov.in/>, accessed on 12th June, 2022.
  6. Bhatia R. Public engagement is key for containing COVID-19 pandemic. *Indian Journal of Medical Research*. 2020 Feb 1;151(2):118–20.
  7. World Health Organization, Protecting yourself and others from the spread COVID-19, 2020, <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public> (Assessed on 20/6/2022).
  8. Anwar S, Nasrullah M, Hosen MJ. COVID-19 and Bangladesh: challenges and how to address them. *Frontiers in public health*. 2020 Apr 30;8:154.
  9. Nour MO, Babilghith AO, Natto HA, Al-Amin FO, Alawneh SM. Knowledge, attitude and practices of healthcare providers towards MERS-CoV infection at Makkah hospitals, KSA. *Int Res J Med Med Sci*. 2015 Oct;3(4):103–2.
  10. Imtiyaz BS, Jamwal C, Hussain A, Roub F, Tariq R, Qayoom I, Syed J, Renzu M. Knowledge, attitudes, and practices about COVID-19 among Kashmiri population: A cross-sectional study. *Indian Journal of Psychiatry*. 2021 Jul;63(4):383.