

# Knowledge Regarding Covid-19 and Its Preventive Measures among Higher Secondary Students in Selected School, Thrissur

Mrs. Nixy Francis. M<sup>1</sup>, Ms. Ancy Sunny<sup>2</sup>, Ms. Catherine Roy<sup>2</sup>, Ms. Devika A P<sup>2</sup>,  
Ms. Liya Mathew<sup>2</sup>, Ms. Maria Rose P S<sup>2</sup>, Ms. Nila Roop<sup>2</sup>, Ms. T D Sruthi<sup>2</sup>

<sup>1</sup>Assistant Professor, Aswini College of Nursing, Thrissur, Kerala, India

<sup>2</sup>BSc Nursing Student, Aswini College of Nursing, Thrissur, Kerala, India

## ABSTRACT

### "An ounce of prevention is worth a pound of cure"

SARS-CoV-2 belongs to the larger family of (RNA) viruses, leading to infections, ranging from the common cold to more serious diseases. Since the WHO affirmed COVID-19 as a pandemic, recommended outbreak infection control measures are being globally employed. Measures to prevent person-to-person transmission were widely implemented. Considering this fact, a descriptive study was conducted with an aim to assess the knowledge regarding COVID-19 and its preventive measures among higher secondary students in selected school, Thrissur. 60 samples were selected by using convenience sampling technique. The result showed that 43 (73%) had moderate knowledge, whereas 9 (15%) has adequate knowledge and only 8 (13%) had inadequate knowledge regarding COVID-19 and its preventive measures.

**KEYWORDS:** *higher secondary students; knowledge; COVID-19; preventive measures*

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## INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is an emerging infectious disease caused by a novel coronavirus, now called Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2), that was first discovered in December 2019 in Wuhan city, Hubei Province, China. On January 30, 2020, the high transmission capacity of this virus to many countries, and high morbidity and mortality led to the declaration of WHO "SARS-CoV-2 is a public health emergency of international concern". That was followed later by another declaration of COVID-19 as a global pandemic on 11 March 2020, due to a continual and a huge rise in the number of affected countries. As of February 14 2021, COVID-19 affected 235 countries which resulting in a total of 106,477,025 cases and 2,361,484 deaths worldwide.

According to current evidence, COVID-19 virus is primarily transmitted between people through respiratory droplets and contact routes. Preventive measures are the current strategy to limit the spread of cases. Early screening, diagnosis, isolation, and treatment are necessary to prevent further spread.

## NEED OF THE STUDY

Students of secondary education (grade 6–10), higher secondary (grade 11-12) and university going students constitute a set of the population whose lives have witnessed a major change throughout this pandemic. India, the second most populated country in the world, has 37.4 million students in higher education.

In the wake of COVID-19 in India, the students of higher education are facing specific challenges related to online teaching-learning. Also, they are prone to health problems brought on directly or indirectly due to COVID-19. It is important to evaluate their knowledge and perception regarding the virus.

### **PROBLEM STATEMENT**

A study to assess the knowledge regarding COVID-19 and its preventive measures among higher secondary students in selected school, Thrissur.

### **OBJECTIVES:**

- To assess the knowledge regarding COVID-19 and its preventive measures among higher secondary students.
- To associate the level of knowledge with selected demographic variables of higher secondary

### **OPERATIONAL DEFINITION**

#### **1. ASSESS:**

In the study, it refers to check and identify the level of knowledge regarding COVID-19 and its preventive measures among higher secondary students using knowledge questionnaire.

#### **2. KNOWLEDGE:-**

In this study knowledge refers to the correct response of the higher secondary students to a structured knowledge questionnaire regarding COVID-19 and its preventive measures.

#### **3. COVID-19:-**

In this study COVID-19 is a contagious disease with mild to severe respiratory illness that is caused by Corona virus and is transmitted by contact with infectious material or with subjects or surfaces contaminated by the causative virus.

#### **4. PREVENTIVE MEASURES:-**

In the study preventive measures refers to hand washing, use of face mask and social distancing to control the spread of corona virus.

### **5. HIGHER SECONDARY STUDENTS:-**

In this study, it refers to students studying in plus 1 and plus 2

### **RESEARCH HYPOTHESIS**

**H<sub>1</sub>:** There is a significant association between level of knowledge regarding COVID-19 and its preventive measures among higher secondary students with their selected demographic variables.

### **ASSUMPTIONS**

- Higher secondary students may have knowledge regarding COVID-19 and its preventive measures.
- Selected demographic variables may have influence on knowledge regarding COVID-19 and its preventive measures.

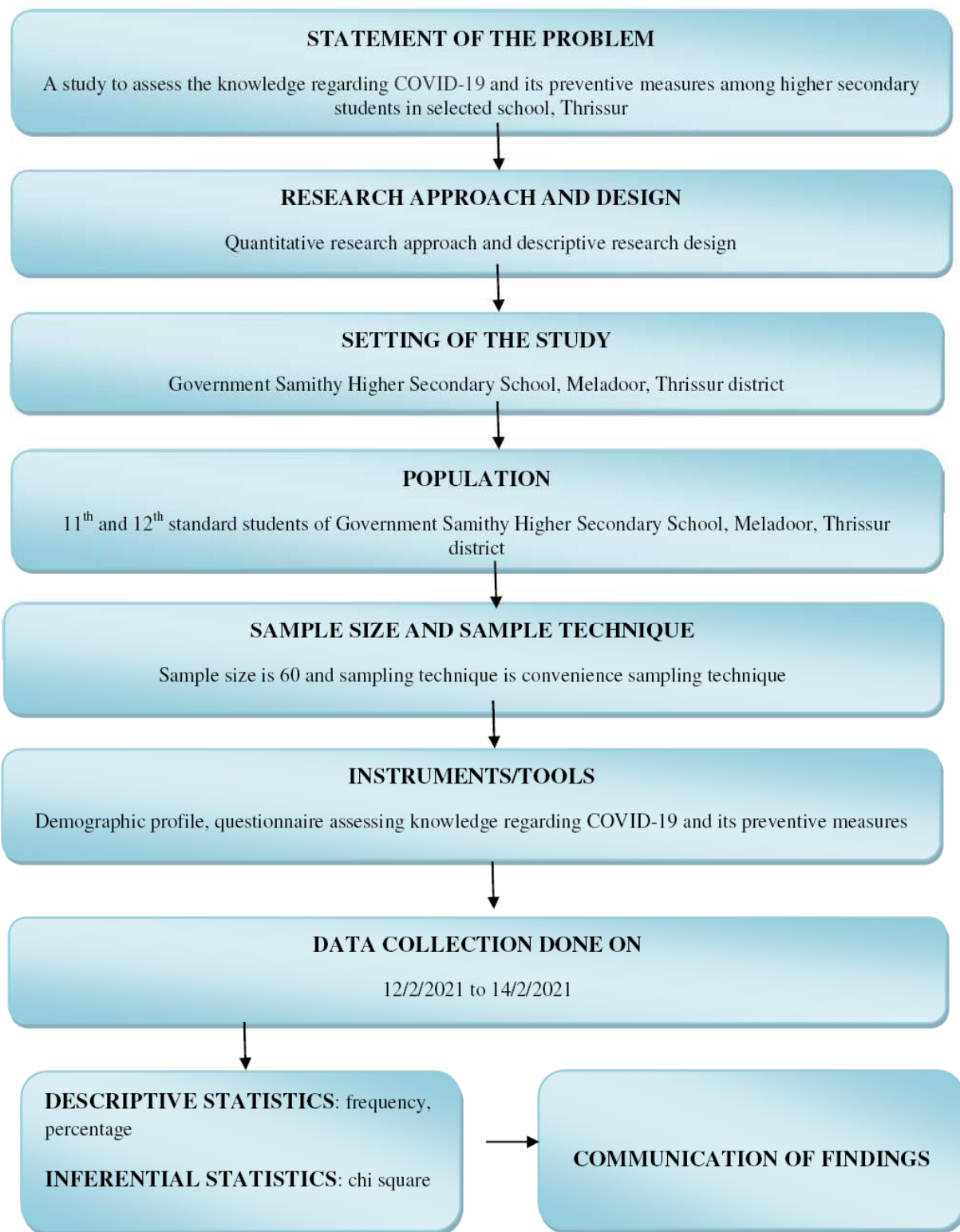
### **RESEARCH METHODOLOGY**

#### **RESEARCH APPROACH:**

The research approach involves the description of plan to investigate the phenomenon under study in structured (quantitative), unstructured (qualitative), or a combination of two methods (quantitative - qualitative integrated approach). The research approach which is adopted in this study is quantitative research approach. Quantitative research approach is formal, objective, systematic process used to describe variables, test relationships between them and examine cause and effect interactions among variables.

#### **RESEARCH DESIGN:**

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to research purpose with economy in procedure. A descriptive research design was used for this study in which knowledge questionnaire was utilized for assessing knowledge regarding COVID-19 and its preventive measures among higher secondary students in selected school, Thrissur.



**Figure 1: schematic representation of the study**

**RESEARCH VARIABLES**

Research variables are the qualities, attributes properties or characteristics that are observed or measured in a natural setting without manipulating and establishing a cause and effect relationship. In the present study, it is planned to assess the knowledge regarding COVID-19 and its preventive measures among higher secondary students in selected school, Thrissur.

**THE SAMPLE**

Sample of present study comprised of 60 higher secondary students in Government Samithy Higher Secondary School, Meladoor, Thrissur District who fulfilled the inclusion criteria.

**SAMPLE SIZE**

Determining adequate sample size is the most important decision the researcher need to take. Sample size for the study consists of 60 higher secondary students in selected school, Thrissur.

## SAMPLING TECHNIQUE

Sampling technique is a process of selecting a portion of the population to represent the entire population. For the present study, convenience sampling technique was used. The researcher sent the questionnaire through Google forms to higher secondary students of Government Samithy Higher Secondary School, Meladoor, Thrissur. The students who are involved in this study are those students who met the inclusion criteria. This process is conducted until the required number of samples were obtained.

## CRITERIA FOR SAMPLE SELECTION

Following criteria were adopted for selection of the sample for this study;

**Inclusion criteria:** This study includes;

- Higher Secondary Students in Government Samithy Higher Secondary School, Meladoor, Thrissur.
- The samples who are willing to participate in this study.

**Exclusion criteria:** This study excludes

- Higher Secondary Students who are not willing to be a part of the study.
- Students who are not studying in higher secondary stream.

## RESULTS;

The findings are explained on the basis of following headings;

**Table 1: Description on demographic profile of knowledge regarding COVID-19 and its preventive measures among higher secondary students**

Demographic variables	Frequency (f)	Percentage (%)
Age in years		
A.14- 16	22	37
B.17-19	38	63
Gender		
A. Male	31	52
B. Female	29	48
C. Others	0	0
Higher secondary stream		
A. Science	13	22
B. Commerce	38	63
C. Humanities	9	15
Type of family		
A. Nuclear family	51	85
B. Joint family	8	13
C. Extended family	1	2
Monthly family income		
A.< Rs.10,000	31	52
B. Rs.10001- 25000	17	28
C. Rs.25001-50000	3	5
D.> Rs.50000	9	15
Area of residence		
A. Urban	7	12
B. Rural	42	70
C. Semi urban	11	18
Education of father		
A. Primary	7	12
B. Secondary	21	35
C. Higher secondary	20	33
D. Graduation and above	12	20
Education of mother		
A. Primary	4	7
B. Secondary	15	25
C. Higher secondary	26	43
D. Graduation and above	15	25

Presence of health worker in family		
A. Yes	7	12
B. No	53	88
Anyone in the family affected by COVID-19		
A. Yes	3	5
B. No	57	95
Attended COVID-19 awareness class		
A. Yes	32	53
B. No	28	47
If yes specify source		
A. School	7	22
B. From health personnel	4	13
C. Through social media	19	59
D. Others	2	6
Source of COVID-19 knowledge		
A. Newspaper and health magazine	32	53
B. Health worker/ASHA worker	15	25
C. Neighbor/ Friends/ Relatives	9	15
D.COVID-19 affected/ Recovered	4	7

**Table 2: Description on the level of knowledge regarding covid 19 and its preventive measures among higher secondary students**

Level of knowledge	Frequency (f)	Percentage (%)
Inadequate knowledge	8	13
Moderate knowledge	43	72
Adequate knowledge	9	15

**Table 3: Description on association between level of knowledge regarding COVID-19 and its preventive measures among higher secondary students with their demographic variables.**

Demographic Variables	$\chi^2$	TV	Level of knowledge
Age	1.88	3.8415	Non-significant
Gender	0.67	3.8415	Non-significant
Family	8.94	3.8415	Significant
Area of residence	0.46	3.8415	Non-significant
Education of father	2.23	3.8415	Non-significant
Education of mother	4.44	3.8415	Significant
Health worker in family	0.00078	3.8415	Non-significant
Attended COVID-19 class	0.0048	3.8415	Non-significant

**Table 1: Description on demographic profile of knowledge regarding COVID-19 and its preventive measures among higher secondary students**

- Out of 60 samples, with regard to age (years), around 38 (63%) of higher secondary students were in age group of 17- 19 years, 22 (37%) belongs to age group of 14- 16 years.
- With regard to gender, 31 (52%) were males and 29 (48%) were females.
- According to higher secondary stream, 38 (63%) were commerce, 13 (22%) were science and 9 (15%)
- Out of 60 samples, with regard to type of family, majority, 51 (85%) of samples belonged to

nuclear family, 8 (13%) belonged to joint family and 1 (2%) belonged to extended family.

- With regard to monthly family income 31 (52%) has monthly income < Rs. 10,000, 17 (28%) has monthly income between Rs.10,001 – Rs.25,000, 9 (15%) has the monthly income of > Rs.50,000 and only 3 (5%) has the monthly income in between Rs.25,001 –Rs.50,000.
- According to area of residence, 42 (70%) were living in rural, 11 (18%) were living in semi-urban and 7 (12%) were living in urban.
- Out of 60 samples, with regard to education of father, 21 (35%) has secondary education, 20 (33%) has higher secondary education, 12 (20%) has graduation and above and only 7 (12%) has primary education.

- According to education of mother, majority 26 (43%) has higher secondary education, 15 (25%) has graduation and above, 15 (25%) has secondary education and only 4 (7%) has primary education.
- With regard to presence of health worker in the family, majority of the family 53 (88%) has no health worker in the family and 7 (12%) has health worker in the family.
- Out of 60 samples, with regard to anyone in the family affected by COVID -19, majority 57 (95%) student's family was not affected by COVID -19 and 3 (5%) student's family was affected by COVID-19.
- According to attended COVID-19 awareness class 32 (53%) attended COVID -19 awareness class. From that, 19 (59%) attended COVID -19 awareness class through social media, 7 (22%) attended COVID-19 awareness class from school, 4 (13%) attended COVID-19 awareness class from health personnel and 2 (6%) attended COVID-19 awareness class from other sources. And 28 (47%) did not attend any type of COVID -19 awareness class.
- With regard to source of COVID-19 knowledge 32 (53%) gained knowledge from newspaper and health magazine, 15 (25%) gained knowledge from health worker or Asha worker, 9 (15%) gained knowledge from neighbours, relatives and friends, 4 (7%) gained knowledge from COVID -19 affected or recovered.

**Table 2: Description on the level of knowledge regarding covid 19 and its preventive measures among higher secondary students**

- The results showed that 43 (72%) of higher secondary students had moderate knowledge whereas 9 (15%) had adequate knowledge and 8 (13%) had inadequate knowledge.

**Table 3: Description on association between level of knowledge regarding COVID-19 and its preventive measures among higher secondary students with their demographic variables.**

- The analysis showed that there is a significant association between the level of knowledge regarding COVID-19 and its preventive measures among higher secondary students with their selected demographic variables such as type of family ( $\chi^2=8.94,TV=3.84$ ) and education of mother ( $\chi^2= 4.44,TV= 3.84$ ) and no significant association between the level of knowledge regarding COVID-19 and its preventive measures among higher secondary students with the selected demographic variables such as age in

years, gender, area of residence, education of father, health worker in family and attended COVID-19 classes.

**SUMMARY**

The present study was undertaken to assess the level of knowledge regarding COVID-19 and its preventive measures among higher secondary students, selected school, Thrissur. This was a descriptive survey with a sample of 60 higher secondary students from Government Samithi Higher Secondary School, Meladoor, Thrissur district. Convenient sampling technique was used. The tool used for data collection consist of 2 sections They are demographic variables and knowledge questionnaire on COVID-19 and its preventive measures. The data was collected on 12/02/2021 to 14/02/2021. Based on the objectives the data was analyzed by using both descriptive and inferential statistical methods. The higher secondary students had moderate knowledge about the COVID-19 and its preventive measures. The knowledge of COVID-19 and its preventive measures reduce the chance of getting COVID-19 disease. The main aim of education about COVID-19 and its preventive measures was to prevent disease and prolong life. If the education is not achieved properly, the quality of life does not improve. So the education is important.

**REFERENCES**

- [1] Abd Elhameed Ali R, Ahmed Ghaleb A, Abokresha SA. COVID-19 related knowledge and practice and barriers that hinder adherence to preventive measures among the Egyptian community. An epidemiological study in Upper Egypt. Journal of public health research. 2021 Mar 5; 10(1):jphr-2020
- [2] Yesuf M, Abdu M. Knowledge, attitude, prevention practice, and associated factors toward COVID-19 among preparatory school students in Southwest Ethiopia, 2021. Plos one. 2022 Jan 24; 17(1):e0262907.
- [3] Sreedharan S. Analysing the covid-19 cases in kerala: a visual exploratory data analysis approach. SN Comprehensive Clinical Medicine. 2020 Sep; 2(9):1337-4
- [4] Sadanandan R. Kerala's response to COVID-19. Indian Journal of Public Health. 2020 Jun 1; 64(6):99.
- [5] Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, Li Y. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: a quick online cross-sectional survey. International journal of biological sciences. 2020; 16(10):1745.

- [6] Gohel KH, Patel PB, Shah PM, Patel JR, Pandit N, Raut A. Knowledge and perceptions about COVID-19 among the medical and allied health science students in India: An online cross-sectional survey. *Clinical epidemiology and global health*. 2021 Jan 1; 9:104-9.
- [7] Peng Y, Pei C, Zheng Y, Wang J, Zhang K, Zheng Z, Zhu P. A cross-sectional survey of knowledge, attitude and practice associated with COVID-19 among undergraduate students in China. *BMC public health*. 2020 Dec; 20(1):1-8.
- [8] Bhagavathula AS, Aldhaleei WA, Rahmani J, Mahabadi MA, Bandari DK. Knowledge and perceptions of COVID-19 among health care workers: cross-sectional study. *JMIR public health and surveillance*. 2020 Apr 30; 6(2):e19160.
- [9] Olaimat AN, Aolymat I, Shahbaz HM, Holley RA. Knowledge and information sources about COVID-19 among university students in Jordan: a cross-sectional study. *Frontiers in public health*. 2020 May 29; 8:254.
- [10] Hatami H, Abbasi-Kangevari M, Malekpour MR, Kolahi AA. Knowledge, attitudes, and safety practices about COVID-19 among high school students in Iran during the first wave of the pandemic. *Frontiers in Public Health*. 2021 Aug 4; 9:680514.
- [11] Azlan AA, Hamzah MR, Sern TJ, Ayub SH, Mohamad E. Public knowledge, attitudes and practices towards COVID-19: A cross-sectional study in Malaysia. *Plos one*. 2020 May 21; 15(5):e0233668.
- [12] Prasad Singh J, Sewda A, Shiv DG. Assessing the knowledge, attitude and practices of students regarding the COVID-19 pandemic. *Journal of Health Management*. 2020 Jun; 22(2):281-90
- [13] Patidar K, Sharma M, Gautam A, Sharma DK, Jain J. COVID-19 knowledge and perception among budding nurses: A questionnaire-based survey'. *International Journal of Nursing Research (IJNR)*. 2020; 6(2):1-7.
- [14] Güner HR, Hasanoğlu İ, Aktaş F. COVID-19: Prevention and control measures in community. *Turkish Journal of medical sciences*. 2020; 50(9):571-7.
- [15] Dardas LA, Khalaf I, Nabolsi M, Nassar O, Halasa S. Developing an understanding of adolescents' knowledge, attitudes, and practices toward COVID-19. *The Journal of School Nursing*. 2020 Dec; 36(6):430-41.
- [16] Al-Hanawi MK, Angawi K, Alshareef N, Qattan AM, Helmy HZ, Abudawood Y, Alqurashi M, Kattan WM, Kadasah NA, Chirwa GC, Alsharqi O. Knowledge, attitude and practice toward COVID-19 among the public in the Kingdom of Saudi Arabia: a cross-sectional study. *Frontiers in public health*. 2020 May 27; 8:217.
- [17] Kumar B, Pinky SD, Nurudden AM. Knowledge, attitudes and practices towards COVID-19 guidelines among students in Bangladesh. *Social Sciences & Humanities Open*. 2021 Jan 1; 4(1):100194.
- [18] Padmanaban S, Rajendran P, Davis P, Velayutham P. Knowledge, attitude and practices towards COVID-19 among higher education students in India: a cross sectional study. *Journal of Public Health*. 2022 Jul; 30(7):1661-73.
- [19] Handebo S, Adugna A, Kassie A, Shitu K. Determinants of COVID-19-related knowledge and preventive behaviours among students in reopened secondary schools: cross-sectional study. *BMJ open*. 2021 Apr 1; 11(4):e050189.
- [20] Apanga PA, Lettor IB, Akunvane R. Practice of COVID-19 preventive measures and its associated factors among students in Ghana. *The American journal of tropical medicine and hygiene*. 2021 Feb; 104(2):526.
- [21] Polit DF, Beck CT. *Nursing research: Generating and assessing evidence for nursing practice*. Lippincott Williams & Wilkins; 2008.
- [22] Suresh S. *Nursing Research and Statistics-E-Book*. Elsevier Health Sciences; 2022 Nov 16.
- [23] Kothari CR. *Research methodology: Methods and techniques*. New Age International; 2004.
- [24] Hasan H, Raigangar V, Osaili T, Neinavaei NE, Olaimat AN, Aolymat I. A cross-sectional study on university students' knowledge, attitudes, and practices toward COVID-19 in the United Arab Emirates. *The American journal of tropical medicine and hygiene*. 2021 Jan; 104(1):75.
- [25] Reuben RC, Danladi MM, Saleh DA, Ejembi PE. Knowledge, attitudes and practices towards COVID-19: an epidemiological survey in North-Central Nigeria. *Journal of community health*. 2021 Jun; 46:457-70.

- [26] Anju KJ, Arulsamy S. The knowledge towards coronavirus among the people of Kerala and Tamilnadu. *J Composition Theory*. 2020; 13:241-8
- [27] Tandon T, Dubey AK, Dubey S, Manocha S, Arora E, Hasan MN. Knowledge, attitude, and perception of Indian population toward coronavirus disease (COVID-19). *Journal of family medicine and primary care*. 2020 Aug; 9(8):4265.
- [28] Souli D, Dilucca M. Knowledge, attitude and practice of secondary school students toward COVID-19 epidemic in Italy: a cross selectional study. *BioRxiv*. 2020 May 9:2020-05.
- [29] Hatabu A, Mao X, Zhou Y, Kawashita N, Wen Z, Ueda M, Takagi T, Tian YS. Knowledge, attitudes, and practices toward COVID-19 among university students in Japan and associated factors: An online cross-sectional survey. *PloS one*. 2020 Dec 21; 15(12):e0244350.
- [30] Chindhalore CA, Dakhale GN, Umathe A. Assessment of knowledge, attitude and practice towards COVID-19 among paramedical staff in Central India: a cross-sectional, online survey. *Journal of Education and Health Promotion*. 2021; 10.
- [31] Lee M, Kang BA, You M. Knowledge, attitudes, and practices (KAP) toward COVID-19: a cross-sectional study in South Korea. *BMC public health*. 2021 Dec; 21:1-0.
- [32] Patil PS. Assessment of knowledge and practice towards COVID-19 amid inhabitants of Karnataka.

