PARIPEX - INDIAN JOURNAL OF RESEARCH | Volume - 10 | Issue - 02 | February - 2021 | PRINT ISSN No. 2250 - 1991 | DOI : 10.36106/paripex

Journal or P	ORIGINAL RESEARCH PAPER	Epidemiology	
ARIPET S	KNOWLEDGE, ATTITUDES AND PRACTICE (KAP) REGARDING THE NOVAL COVID -19 PANDEMIC MONG FACULTY, P.G. STUDENTS AND INTERNS OF I.P. GOVT DENTAL COLLEGE AND HOSPITAL HIMLA.	KEY WORDS: Knowledge, Attitude, Practice, COVID-19, Shimla, India	
Dr Kalpana	Post Graduate Student, Department of Pediatric a Govt. Dental College and Hospital Shimla (1710)	and Preventive Dentistry H.P. D1),H.P.,India.	
Dr Seema Thakur*	Prof & Head, Department of Pediatric and Preventive Dentistry H.P. Govt. Dental College and Hospital Shimla (171001), H.P., India. *Corresponding Author		
Dr Deepak Chauhan	Assistant Professor, Department of Pediatric and Govt. Dental College and Hospital Shimla (1710)	Preventive Dentistry H.P. D1),H.P.,India.	
Dr. Tripti Chauhan	Associate Professor, Department of Pediatric and Govt. Dental College and Hospital Shimla (1710)	l Preventive Dentistry H.P. D1),H.P.,India.	
Dr Ashish Justa	Senior Lecturer, Department of Pediatric and Preventive Dentistry H.P. Govt. Dental College and Hospital Shimla (171001), H.P., India.		
Dr Vandna	BDS, M.Sc. Pharmacology AIIMS New Delhi		
Rohan Singh Chauhan	MBBS Student, MMMC, Kumarhatti Distt Solan H.I	P.(173229)	

Background: There is a new public health crises threatening the world with the emergence and spread of 2019 novel corona virus (2019-nCoV) or the severe acute respiratory syndrome corona virus 2 (SARS-CoV-2). The virus originated in bats and was transmitted to humans through yet unknown intermediary animals in Wuhan, Hubei province, China in December 2019. On 30 January 2020, World Health Organization (WHO) officially declared the COVID-19 epidemic as a public health emergency of international concern. This study was conducted to evaluate the knowledge, attitude, and practice (KAP) at the time of COVID-19 pandemic to detect related associated socio-demographic variables Faculty, Post graduate (P.G) students and interns of Himachal Pradesh Govt. Dental College and Hospital (HPGDC) Shimla. Methods: An online questionnaire was distributed among dentists of HPGDC Shimla. The questionnaire was divided into 2 sections: the 1st one contained personal information, whereas the 2nd sections assessed knowledge (8 questions), attitudes (2 questions) and practices (8 questions) of the dentists. **Results:** The total number of the responses received (120) was divided with regard to their socio-demographic characteristics such as gender, age and qualifications. Majority (58.3%) of participants were female, 80% participants ranges between 20-29 years. As per Qualification (62.5%) were interns followed by P.G. students (29.2%) and 5% including faculty and only 3.3% were Medical Officer Dental. Fair knowledge, were observed among 53.3% followed by Good knowledge 41.7% followed by poor knowledge 4.9% respectively. Conclusion: Our findings suggest that Faculty, P.G. students and interns of HPGDC Shimla, demonstrated decent knowledge, appropriate practice, and positive attitude towards COVID-19 at the time of its outbreak.

INTRODUCTION

ABSTRACT

The novel Corona virus (2019-nCoV, officially known as SARS-CoV-2 or COVID-19) was first reported in December 2019, as a cluster of acute respiratory illness in Wuhan, Hubei Province, China, from where it spread rapidly to over 198 countries. Hence, it was declared as a global pandemic by WHO on 12th March 2020.^{1,2}

The ministry of Health and Welfare of India confirmed the country's first Covid-19 case on 30 January in a student who arrived in Kerala state from Wuhan. Himachal Pradesh reported first two corona virus positive cases on 20^{th} March,2020. On 23^{rd} march,2020 state reported first death. On 23^{rd} march centre has ordered all states in India to impose lockdown as the cases have touched 478 so far and the country records ninth death. On the 11^{th} May India has recorded 67,152 confirmed cases, 2,206 deaths and 20,917 cured cases.³

As per worldometer total no of confirmed Covid cases in India were 9,050,613 with second rank worldwide. Among this, total deaths were 132,764 (2%) and recovered cases were 8,478,124 (98%) on 21 November 2020.⁴

In order to introduce effective control measures, knowledge about basic hygiene principles, modes of disease transmission, in such an environment is, therefore important and to achieve an ultimate success against the ongoing pandemic is necessary.⁸⁴

Health authorities in India have made substantial efforts to control the disease through various measures and prevention, which can help to control the diseases.⁷

The main goal of the present study is to measures the level of KAP regarding COVID-19, in dentists to explore awareness, which is associated with the prevention of pandemic.

MATERIALS AND METHODS Participants and data collection

This cross-sectional survey was conducted among the Faculty, P.G. students and interns of HPGDC Shimla during April, to August, 2020.

As we all know, social-distancing & wearing mask are the best way of prevention from COVID-19, therefore, instead of conducting a community-based survey, this study collected the data using Google form platform as an online survey. The link of Google form was posted and circulated using various social media platforms like Whats-app Groups and e-mail addresses of the Faculty, P.G. students and interns. The study participants were informed about the details of the study,

200

PARIPEX - INDIAN JOURNAL OF RESEARCH | Volume - 10 | Issue - 02 | February - 2021 | PRINT ISSN No. 2250 - 1991 | DOI : 10.36106/paripex

objectives for filling the questionnaire and confidentiality at the beginning of the survey, and informed consent was obtained from each participant. It has been disclosed to all the participants that their identity will keep confidential and the results will be used only for research purposes. Among these 120 responses were final samples included in the study.

Questionnaire

A self-designed questionnaire was prepared, which comprised of two parts to collect demographic details of the participants along with KAP towards COVID-19 pandemic. The questions were established on the basis of some published literature and the authors' experience of KAP.^{8,9} After the preparation of the questionnaire, it was sent to some experts to consult their opinions regarding the validity of the questionnaire followed by a small pilot study to test its simplicity and difficulty.

The first part of the questionnaire covered demographic information of the participants and the second part contained questions for KAP assessment. Demographic variables included age, gender, and qualification. The self-designed questionnaire comprised 18 questions regarding which 8 for knowledge, 2 for attitude, and 8 for practice. Knowledge questions mainly dealt with the participants' knowledge regarding clinical symptoms, transmission routes, prevention, and control of COVID-19. These questions were responded on an option based with correct or incorrect and yes or no options. Higher scores represented a better knowledge of COVID-19. Similar options were assigned for the questions related to attitude and practice.

Statistical analysis

Data was Statistically interpreted by Epi–Info Version 7. Parametric tests (*t* and ANOVA) were used for comparison between different subgroups of the participants preintervention. Comparisons of KAP scores among the students with respect to age gender and qualifications are done using independent samples *t*-test and one-way analysis of variance (ANOVA), as appropriate. First part of questionnaire included demographic information of participants regarding age (p>0.710), gender (p>0.224) and qualifications (p>0.327) were not statistically significant.

RESULTS

Socio-demographic characteristics of the participating dentists

Total of 120 submissions were recorded. Majority (58.3%) of participants were female . 80% age ranges between (20-29),14.4 % age ranges between (30-39), 5.8 % age ranges between (40-49) .As per qualification 62.5% included interns, 29.2% were post graduate students, 5% were faculty and only 3.3% were M.O. dental.**(Table-1)** All were working in HPGDC Shimla, during the time of study.

Table-1

Demographic data of the study population or participants

Ages	(20-29)	(30-39)	(40-49)	
Years and %	(80%)	(14.4%)	(5.8%)	
Gender	Female	Male		
%	58.3%	41.7%		
Qualifications	B.D.S.	P.G.	Faculty	M.O.
	(Interns)	Students		Dental
%	62.5%	29.2%	5.0%	3.3%

As per concern of the dentist,only 58.3% knows which mask to be used,while treating patients. Overall there is good knowledge regarding Covid-19 as per age, gender and qualifications of dentists. **(Table-2)**

Table-2

Knowledge questions regarding COVID-19

Questionnaire	Incorrected	Corrected
	(0)	(1)

www.worldwidejournals.com

Covid-19 is caused by which virus?	7.5%	92.5%
What is the incubation period of the Covid-19 virus?	8.3%	91.7%
What are the symptoms of Covid- 19 infections?	32.5%	67.5%
How the Covid -19 is transmitted?	24.2%	75.8%
What is the Lab test available to diagnose Covid-19?	6.7%	93.3%
What percentage of Covid-19 positive patients show mild symptoms?	35.8%	64.2%
What is the overall mortality rate of the Covid-19 diseases?	7.5%	92.5%
Which category does the dentists fall in risk of exposure?	18.3%	81.7%
Which mask should be generally be used by dentists when treating patients?	41.7%	58.3%

Regarding attitude of dentists only 52.5% have attended training regarding Covid -19.(**Table-3**)

Table-3

Attitudes questions regarding COVID-19

Questionnaire	no(0)	yes(1)
Have you taken any training regarding	47.5%	52.5%
Covid-19 infections?		
Are you currently practicing dentistry	80%	20%
after the Covid-19 related restrictions?		

Majority of participants (85.8%) preferred emergency dental treatment only .(**Table-4**)

Table-4

Practices questions regarding COVID-19

Questionnaire	N0(0)	yes(1)
Are the Personal protection equipment	5.8%	94.2%
/suspected Covid-19 patients?		
Are used PPE useful in protecting you from confirmed /suspected Covid-19 patients?	55.0%	45.0%
Will you provide emergency dental treatment to Covid-19 positive patients?	14.2%	85.8%
Will you provide dental treatment to a previous Covid-19 positive patients?	10.8%	89.2%
Would you change from PPE to personal clothing before returning home?	3.3%	96.7%
Would you wash your clothing separately at home?	1.7%	98.3%
Would you take bath immediately when you get inside home?	5.0%	95.0%

Knowledge and practice scores of the participating dentists

Every right question score 1.Based on the median of the scores obtained, the cut-off points for the knowledge,attitude and practices(good score ranges between 15-18),(fair score ranges between 11-24) and(poor scores ranges between <10).Majority of dentists had fair score including 53.3% followed by Good score achieved by 41.7% of total dentist and only 4.9% had poor score. **(Table-5)**

TABLE-5

KAP Score percentage

Score	KAP Score Range	KAP Score percentage
good knowledge	15-18	41.7%
fair knowledge	11-14	53.3%
poor knowledge	<10	4.9%
Total	18	100%

PARIPEX - INDIAN JOURNAL OF RESEARCH | Volume - 10 | Issue - 02 | February - 2021 | PRINT ISSN No. 2250 - 1991 | DOI : 10.36106/paripex

DISCUSSION

The transmission of COVID-19 poses a risk for people who come in close contact with an infected individual, and the risk is greater among those who are in close proximity to or work near the patient, i.e., relatives and healthcare workers. The distance between the working field and the dentist is approx. 35–40 cm and certain procedures can be very time-consuming, which puts the dentist at a higher risk of contacting COVID-19.^{10,11}

To assess the preparedness of the healthcare worker to combat any disease outbreak, researchers across the globe try to assess their knowledge of the disease. The present knowledge scores regarding COVID-19 (92.7%) are higher as compared to those presented by Gupta et al. (the Zika virus (ZIKV) pandemic; 38.2% amongs Indian dentists), Fatiregun et al. (the swine influenza (H1N1) virus; 31% among senior Nigerian healthcare workers), Aung et al. (the Ebola virus; 54.7% nursing students in Myanmar), Shivlingesh et al. (the influenza A (H1N1) outbreak; 52.6% of the Indian population), and Singh et al. (the ZIKV outbreak; 61.7% among the students of a dental institute).¹²⁻¹⁵

CONCLUSION

To conclude, our findings suggest that dentists of HPGDC Shimla, demonstrated good knowledge, positive attitudes, and reasonable practice regarding COVID-19 during the outbreak. Furthermore, based on the significant positive association among knowledge, attitude, and practice in our study, health education programs, particularly targeting lower knowledge individuals regarding COVID-19, are essential for encouraging positive attitude and maintain safe practices. Hopefully, by increasing knowledge via public health policy-makers, and the cooperation of the Indian authorities, elimination of the disease can be anticipated.

Acknowledgments

We thank all the study participants for their voluntary participation and for providing essential information.

REFERENCES

- Eurosurveillance Editorial T. Note from the editors: World Health Organization declares novel coronavirus (2019-nCoV) sixth public health emergency of international concern. Euro surveillance : bulletin Europeen sur les maladies transmissibles = European communicable disease bulletin. 2020;25(5).Epub 2020/02/06.
- World Health Organization. WHO announces COVID-19 outbreak a pandemic. http://www.euro.who.int/en/health-topics/health-emergencies/ coronavirus-covid19/news/news/2020/3/who-announces-covid-19outbreak-a-pandemic
- India Covid-19 situation followed by details on states, union territories and cities.
- 4. www.worldometers.information>countryIndia.
- Ajilore K, Atakiti I, Onyenankeya K. College students' knowledge, attitudes and adherence to public service announcements on Ebola in Nigeria: Suggestions for improving future Ebola prevention education programmes. Health Education Journal. 2017;76(6):648-60. Epub 2017/10/01.
- Tachfouti N, Slama K, Berraho M, Nejjari C. The impact of knowledge and attitudes on adherence to tuberculosis treatment: a case-control study in a Moroccan region. The Pan African medical journal. 2012;12:52. Epub 2012/09/01.
- Bell DM. Public health interventions and SARS spread, 2003. Emerging Infectious Diseases.2004;10(11):1900-6. Epub 2004/11/20.
- Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, et al. 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. *Int J Biol Sci* 2020; 16(10):1745-1752.
- Huynh G, Nguyen TNH, Tran VK, Vo KN, Vo VT, Pham LA. Knowledge and attitude toward COVID-19 among healthcare workers at District 2 Hospital, Ho Chi Minh City. Asian Pac / Trop Med 2020;
 Pirvu C, Pätrascu I, Pirvu D, Ionescu C. The dentist's operating posture –
- Pîrvu C, Pătraşcu I, Pîrvu D, Ionescu C. The dentist's operating posture ergonomic aspects. JMed Life. 2014;7(2):177–182.
- Meng L. Hua F, Bian Z. Coronavirus Disease 2019 (COVID-19): Emerging and future challenges for dental and oral medicine [Epub ahead of print]. J Dent Res. 2020.
- Gupta N, Randhawa RK, Thakar S, Bansal M, Gupta P, Arora V. Knowledge regarding Zika virus infection among dental practitioners of Tricity area (Chandigarh, Panchkula and Mohali), India. *Niger Postgrad Med J*. 2016;23(1):33–37.
- Fatiregun AA, Olowookere SA, Oyebade AO. Pandemic influenza A(H1N1): Knowledge among senior health workers at a secondary health care institution in Southwest, Nigeria. Afr Health Sci. 2011;11(2):171–175.
- Aung MH, Oo WM, Lynn KK, Mya KM. Knowledge and perception towards Ebola virus disease among nursing students in the University of Nursing, Yangon. Myanmar Med J. 2015;57(3):8–14.

 Shivlingesh KK, Agrawal A, Chaudhary H, Singh K, Mishra P, Asawa K. Public knowledge, attitude and behavioural changes in an Indian population during the Influenza A (H1N1) outbreak. *JInfect Dev Ctries*. 2010;4(1):7–14.