



Evaluation of Awareness, Effectiveness, Difficulties and Acceptance of E - Learning Among Preclinical Prosthodontic Students during Covid- 19 Pandemic

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ABSTRACT: The main aim of the study is to assess the dissemination of knowledge and awareness of Covid-19 situation. The difficulties, effectiveness, acceptance and satisfaction of e - learning among Preclinical Prosthodontic students.

KEYWORDS: Classroom learning, Distance learning, Dentistry ,students perception; E-learning; COVID-19.

I. INTRODUCTION

The World Health Organization declared the pandemic of the novel SARS-CoV2 infection early this year and it has now become a major public health challenge worldwide . The infection control and physical distancing measures taken are crucial to prevent the virus from further spreading and to help control the pandemic situation. The policy of compulsory physical distancing has been implemented in many countries including India resulting in nationwide school and university closures. In accordance with this policy, dental academic institutions are compelled to make appropriate and timely modifications in order to continue to deliver education and thus sustain the continuation of students' academics. The teaching and learning activities were immediately shifted to full E-learning. E-learning is defined as the learning that makes use of Information and Communication Technologies (ICTs).The previous studies have also shown various e-learning and online learning tools that are effective for teaching and learning in the fields of health profession, including dentistry.

During this COVID-19 pandemic, courses delivered in student centered learning methods were immediately moved to full E-learning. In the first half of semester before the pandemic the students have started the theory classes and Preclinical classes, clarification sessions and interactive lectures were carried out in-campus classroom learning while in the second half of semester, learning activities were delivered in full distance learning employing various online meeting

platforms. In order to make the format of discussion sessions stay similar as it had been conducted before the pandemic, every online session was delivered synchronously with the attendance of a facilitator in each group. Students and facilitators' time spent on setting or accomplishing tasks was similar as in classroom learning.The Students feedback could provide important information for the evaluation e learning so as to improve future learning strategies. Therefore, the study aimed to analyze the second year preclinical students,their difficulties, effectiveness, acceptance and satisfaction of e - learning.An online questionnaire was distributed to the second year dental students at the end of the second year semester.

II. METHOD

This study was conducted after getting clearance from the institutional ethics committee. A questionnaire was given online in google form to the second year dental students who consented for study of Sree anjaneya institute of dental sciences,Modakkallur, Kozhikods,Kerala. Total of 218 students from the college were considered for this study.The students who didn't give consent for participation were not enrolled in the study. The link of the questionnaire done in google form was sent through Emails and Whatsapp to the student. They were asked to choose and tick the response to each question..The participants were encouraged to provide feedback with a free mind. The results were analysed from the data generated .

Statistical analysis: Online responses were analysed for number and percentage.

III. RESULTS AND FINDINGS

A total of 218 students responded to the online questionnaire,of which 216 students included their name and 210 students included their Email id. The study sample was composed of 218 second year dental students.A total 21 questions were provided of which questions on basic



knowledge of the covid -19 virus were also included. The response to virus causing Covid-19 is SARS 8.1%, SARS COV2 82.8%, 2009 NCO is 1%, SARS and SARS

COV2 is 9.1%. The response to Covid -19

is a RNA virus 78.8, DNA virus 3.4%, Virus without genetic material 8.4%, Don't know is 11.8% and the response to main mode of transmission is aerosols 94.4%, Blood 0.9%, Touch 13.1%, Don't know is 0%.

Reflective Questions on Pre-Clinical Works

Question	Responses			
	Yes	No	Not Sure	Don't know
1. Do you think Pre - Clinical Prosthodontic work is more difficult than other Pre - Clinical works?	15.30%	40.50%	36.70%	10.70%
2. Are you able to learn Pre - Clinical procedures through online classes ?	17.8%	37.4%	36.4%	11.2%
3. Do you know the proper manipulation of Dental materials used in Prosthodontics ?	19.5%	17.7%	59.5%	7%
4. Are you confident in doing a teeth arrangement by watching videos without direct supervision and guidance ?	12.6%	49.5%	35.5%	4.7%
5. Do you think you will be capable of attending a Pre - Clinical Prosthodontic exam by online classes only?	5.6%	58.9%	31.8%	7%
6. What are problems faced during Pre - Clinical online classes ?	Communication	Understanding	Interest	Confidence
	47.1%	38.3%	9.7%	32%
7. Are you going through any Psychological stress for not attending preclinical classes in person ?	Occasionally	Sometimes	Always	Never
	9.6%	61.7%	2.90%	27.3%
8. What will you do if you don't understand an online Pre - Clinical class ?	Refer videos	Ask friends	Refer textbooks	Ask teachers
	44.5%	35.1%	45.5%	20.9%
9. Are you able to learn angulation, shape and measurements in teeth arrangement by online classes ?	Yes	No	Don't know	Not sure
	14.8%	37.3%	16.7%	32.5%



10. Are you confident enough to take patients in clinics by learning through online classes ?	Yes	No	Not Sure	Don't know
	2.8%	66%	29.3%	3.7%
11. Have you ever tried to do Pre - Clinical work at home during Covid -19 pandemic?	Yes	No	Sometimes	Thought about
	4.2%	74.6%	8.9%	16.4%
12. Do you think online classes will affect your Pre -clinical knowledge?	Yes	No	To some extent	Not sure
	57.5%	7.9%	30.4%	6.5%

Reflective Questions on Online Classes

Question	Responses			
2.1. Do you think online classes are as beneficial as classroom teaching?	Yes	No	Sometimes	Never
	17.8%	40.7%	43%	1.4%
2.14. Do you think online classes are affordable for all students?	Yes	No	Not Sure	Maybe
	8.5%	34.9%	33.5%	25.9%
2.15. Do you think online classes affect the student teacher relationship?	Yes	No	Sometimes	Never
	57.5%	15.4%	28.5%	0.5%
2.17. Do you think online classes will badly affect communication skills of students ?	Yes	No	Some extent	Not sure
	49.3%	14.9%	30.7%	8.8%
2.18. Do you think online classes will affect your practical knowledge ?	Yes	No	Sometimes	Not sure
	73.5%	2.8%	18%	6.6%

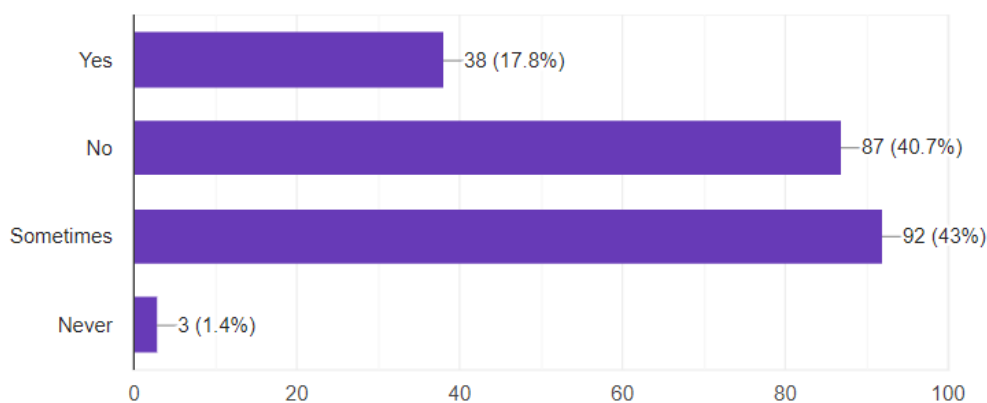


Fig 1: Is online classes as beneficial as offline classes

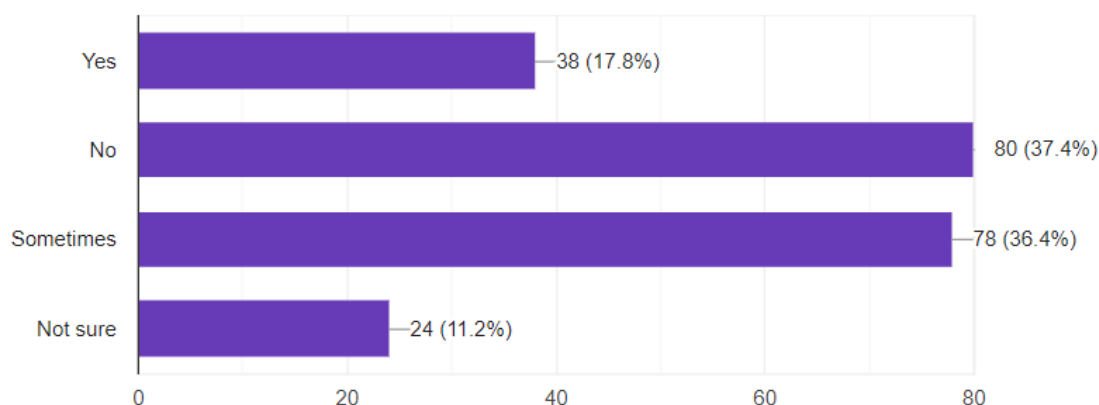


Fig2: Are you able to learn Pre-clinical procedures through online classes

IV. DISCUSSIONS

The COVID-19 pandemic has affected millions of students worldwide. The sudden transformation in the teaching and learning activities into virtual modalities had to be carried out in order to continue the academic courses.. The present study documented the student perspective of student-centered active learning delivered through full distance learning about online classes in general and Preclinical works and compared to the classroom learning.17.8% of the students felt that online classes are as beneficial as offline classes ,but 40.7%students felt its not beneficial.17.8% of the students were able to do preclinical works through online class but 37.4% of the students found it difficult.While 12.6% of the students were able to do teeth arrangement after online videos 49.5%felt its difficult.Majority of the students were not confident to attend exam after online study nor were they confident to enter clinic after online study.

We found that e-learning cannot be a complete alternative to classroom learning especially for works involving laboratory as many students feel its inefficient and difficult.

V. CONCLUSION

The study analyses the perception of second year students towards e-learning during the ongoing COVID-19 pandemic. The study reveals that students find it difficult to do preclinical works through e-learning..The students found online classes and online preclinical classes difficult.This finding is based on usefulness, self-efficacy, ease of use, and the behaviour of students as regards e-learning. The study affirms that face to face learning is better than e-learning.

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