

KNOWLEDGE REGARDING USAGE OF COMPUTER AMONG INDIAN DENTAL STUDENTS.

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ABSTRACT: AIM: This study was conducted to assess the knowledge regarding usage of computer among Indian Dental students. **MATERIALS AND METHODS:** The study was conducted among the Dental students of two different states of India. The validated structured questionnaire was distributed among 216 Dental students from first year to internship and the data was collected and analysed using SPSS software version 19.0. **RESULTS:** It was found that Dental students of India had better access to computer in which internet was used mostly for academic purpose and the mode of usage of internet is through phone in both the states. **CONCLUSION:** Though the Dental students use internet for academic purpose the students should also be encouraged for updating the knowledge about Recent Researches, Journals and Review Articles.

KEY WORDS: Dental students, Computer Assisted Learning, Information Technology (IT)

INTRODUCTION: From 21st century there was rapid advancements in computer technology and communication. The use of internet also has become important in our day to day life in worldwide.

Internet is an excellent tool for students to get information in educational fields and access to the external world there by which most of the information is shared and known among the students all over the world.

Computer-assisted learning (CAL) in dental education first immersed in 1971 with its introduction in university of Kentucky. CAL use along with information and communication technology is rapidly increasing. The internet was originally developed by the United States of America's military in the 1960's as a means of ensuring a workable communication system¹. Information and communication technology provides automation, creative tools, local and global communications, and support for education²⁻³. Information and communication technology (ICT) in medical and dental teaching is focused on web-based teaching which compromises communication interactivity, and displaying clinical images⁴.

Recent studies have shown the use of computerised information system by medical professionals can improve the quality of care, there by enhance the evidence based treatments. Recently internet usage has increased in India and anticipated that this increase would be reflected among health professionals for education and clinical purpose.

There are few surveys which have reported the computer literacy among medical students and health professionals in India, but we are unable to trace any survey among dental students. Thus, the present study aims to investigate the knowledge regarding usage of computer among Indian dental students.

MATERIALS AND METHODS: This cross sectional study was conducted during the month of August 2013. There are 29 Dental colleges in Tamilnadu and 20 Dental colleges in Andhra Pradesh in which

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two colleges were randomly selected. For the study validated and structured closed ended questionnaire was used. The sample size was calculated to be 216 based on previous studies conducted by Lamis D. Rajab et al in Jordan⁶ by using G power statistical software. The permission for proceeding the survey was got from Priyadarshini Dental College and Hospital Review Board and ethical clearance was obtained from institutional ethical committee according to Helsinki Declaration of 1975. The Questionnaire was distributed among the Dental students from first year to internship who were present on the day of data collection and only the completed questionnaire was analysed.

Data entry was done in MS Excel Sheet mean and percentages were calculated. Mann – Whitney test were done to analyse if there was any significant difference of knowledge in computers between Dental students of two states by using SPSS software version 19.0.

RESULTS: The questionnaire was distributed among 324 Dental students in which 216 completed questionnaires were collected and analysed were the response rate was 74.6% among the Dental students of two states. Table 1 shows computer knowledge of Dental students of two different states.

	TAMILNADU		ANDHRA PRADESH	
	FREQUENCY	%	FREQUENCY	%
Do you have access to a computer?				
Yes	106	98.4	102	94.4
No	6	5.5	8	7.4
If yes, please answer the following questions:				
At university	8	7.4	5	4.6
At home	78	72.2	70	64.8
Other place (Internet café)	19	17.6	17	15.7
How would you describe the access and availability of the computer?				
very good	22	20.4	11	10.2
Good	55	50.9	53	49.1
Adequate	23	21.3	24	22.2
Poor	5	4.6	4	3.7
	TAMILNADU		ANDHRA PRADESH	
	FREQUENCY	%	FREQUENCY	%
How would you grade your general IT skills (Windows, Microsoft Office, and Internet)?				
Unable/beginner	17	15.7	18	16.7
Competent in some basic skills	69	63.9	61	56.5
Competent in most basic skills	18	16.7	13	12.0

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How did you familiarize yourself with computers? a) Through a course in the university` b) Through personal study and experience c) Through a special course d) a, b & c e) b & c f) a & b	1	0.9	3	2.8
	68	63.0	59	54.6
	9	8.3	6	5.6
	8	7.4	11	10.2
	14	13.0	7	6.5
	5	4.6	6	5.6
How would you describe the quality of IT training you received? Good/very good Adequate Poor/very poor	14	13.0	11	10.2
	79	73.1	63	58.3
	12	11.1	18	16.7
How would you rate your ability to use a word processor to produce a page of text? Unable/beginner Competent in some basic skills Competent in most basic skills	TAMILNADU		ANDHRA PRADESH	
	FREQUENCY	%	FREQUENCY	%
	17	15.7	25	23.1
	71	65.7	52	48.1
	16	14.8	15	13.9
How often do you utilize the computer for academic activities? Every day 2-3 days a week Once a week Once a month Never	31	28.7	19	17.6
	20	18.5	17	15.7
	34	31.5	33	30.6
	17	15.7	20	18.5
	3	2.8	3	2.8

TABEL 1: QUESTIONNAIRE ON COMPUTER ACCESS

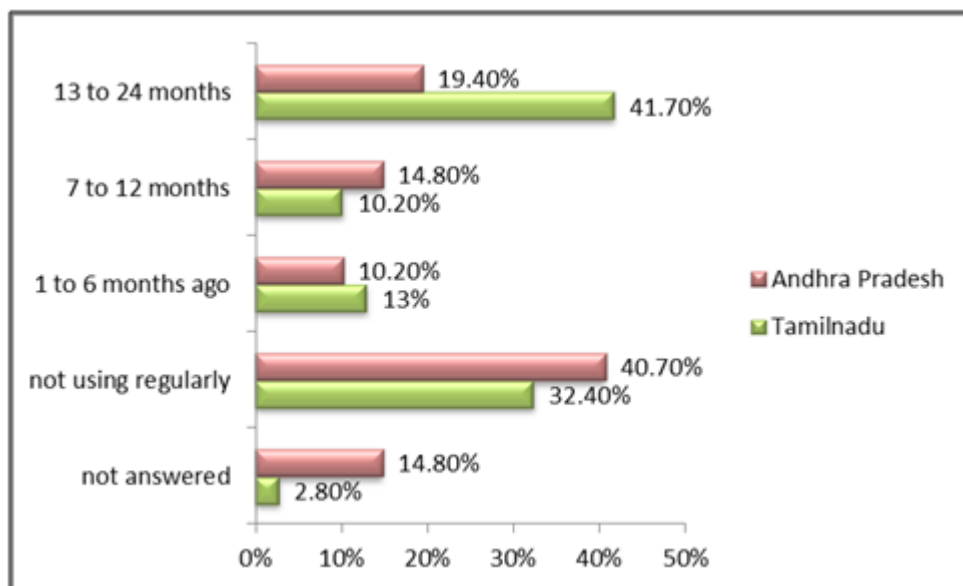


FIG. 1: DURATION OF COMPUTER USAGE AMONG DENTAL STUDENTS

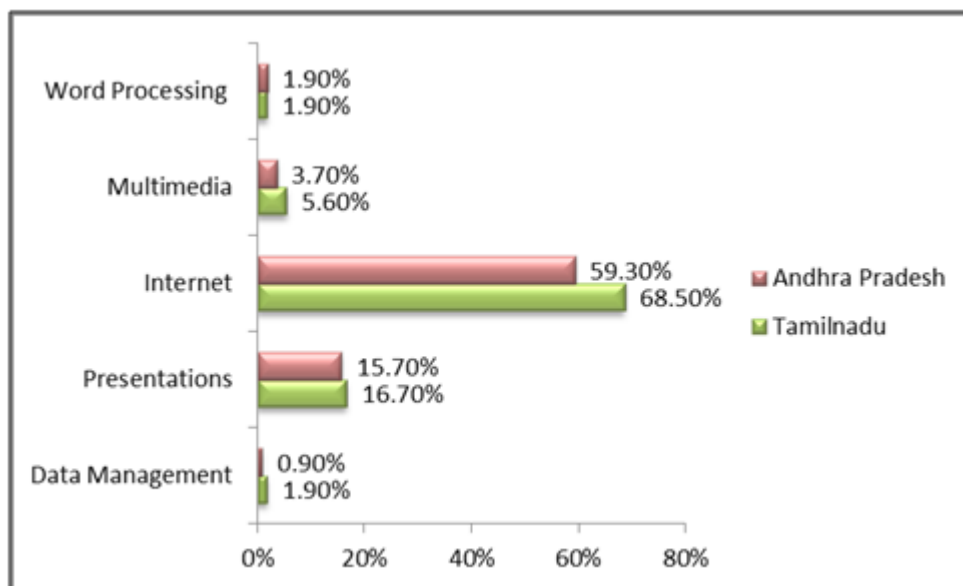


FIG. 2: MODE OF COMPUTER USAGE IN ACADEMICS AMONG DENTAL STUDENTS

61.1% students of Tamilnadu and 52.8% students of Andhra Pradesh had reported limited access to printer. In which students who had access to printer were 36.1% students of Tamilnadu and 32.4% students of Andhra Pradesh who had better access to usage of printer at home when compared to other places of usage and the availability was adequate among two states.

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	TAMILNADU		ANDHRA PRADESH	
	FREQUENCY	%	FREQUENCY	%
Do you have access to the Internet?				
Yes	103	95.4	84	77.8
No	2	1.9	8	7.4
If you answered yes to using the Internet, please answer the following question:				
At university	7	6.5	2	1.9
At home	71	65.7	61	56.5
Other place (Internet cafe)	14	13.0	11	10.2
At home and Internet café	11	10.2	10	9.3
How would you describe the access and availability of the Internet?				
very good	20	18.5	26	24.1
Good	55	50.9	47	43.5
Adequate	24	22.2	10	9.3
Poor	3	2.8	1	0.9
How easy do you find the Internet to use?				
Very easy	43	39.8	28	25.9
Fairly easy	35	32.4	32	29.6
Average	22	20.4	23	21.3
Not very easy	2	1.9	0	0
Not at all easy	1	0.9	1	0.9
How quick do you think it is to use?				
Very quick	28	25.9	21	19.4
Fairly quick	42	38.9	38	35.2
Average	29	26.9	23	21.3
Not very quick	3	2.8	2	1.9
Overall, how confident are you in the relevance of information on the Internet?	TAMILNADU		ANDHRA PRADESH	
	FREQUENCY	%	FREQUENCY	%
Very confident	15	13.9	14	13.0
Fairly confident	40	37.0	35	32.4
Average	46	42.6	35	32.4
Not very confident	1	0.9	0	0
How often do you use email?				
Every day	21	19.4	16	14.8
2-3 days a week	14	13.0	16	14.8
Once a week	32	29.6	26	24.1
Once a month	24	22.2	16	14.8
Never	12	11.1	10	9.3

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How useful do you think lecture notes on the school website would be?				
Very useful	39	36.1	35	23.1
Fairly useful	24	22.2	30	27.8
Average	31	28.7	27	25.0
Not very useful	8	7.4	2	1.9
Not at all useful	1	0.9	0	0
Do you think this would stop you going to lecture?				
Yes	10	9.3	8	7.4
No	79	73.1	71	75.7
Possibly	14	13.0	5	4.6
How often do you use the Internet for dentistry?				
Every day	14	13.0	14	13.0
2-3 days a week	22	20.4	22	20.4
Once a week	37	34.3	29	26.9
Once a month	28	25.9	19	17.6
Never	2	1.9	0	0
	TAMILNADU		ANDHRA PRADESH	
How often do you use the Internet for pleasure?	FREQUENCY	%	FREQUENCY	%
Every day	37	34.3	23	21.3
2-3 days a week	16	14.8	24	22.2
Once a week	29	26.9	21	19.4
Once a month	14	13.0	11	10.2
Never	7	6.5	5	4.6
Do any from the following list stop you from using the Internet?				
a) Viruses				
yes	61	56.5	50	46.3
no	42	38.9	34	31.5
b) Cost of use				
yes	41	38.0	25	23.1
no	62	57.4	59	54.6
c) Time—if the line is busy				
yes	62	57.4	54	50.0
no	41	38.0	30	27.8
d) Availability of computers				
yes	36	33.3	34	31.5
no	67	62.0	50	46.3
e) Confidence in the accuracy of information				

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yes	37	34.3	35	32.3
no	66	61.1	49	45.4
f) Confidence in the ability to use				
yes	40	37.3	34	31.5
no	63	58.3	50	46.3
Have you visited any sites of interest?				
Yes	79	73.1	65	60.2
No	24	22.2	19	17.6
Which is your favourite non dental sites? Facebook Yahoo Twitter Google You tube other sites	TAMILNADU		ANDHRA PRADESH	
	FREQUENCY	%	FREQUENCY	%
	33	30.6	28	25.9
	3	2.8	1	0.9
	2	1.9	2	1.9
	44	40.7	43	39.8
	20	18.5	10	9.3
	1	0.9	0	0
Which is your favourite dental sites?				
Medline	10	9.3	8	7.4
PubMed	20	18.5	5	4.6
Dental journals	22	20.4	16	14.8
Other dental sites (dental materials, dental science.,)	51	47.2	55	50.9

TABEL 2: QUESTIONNAIRE ON INTERNET ACCESS AMONG DENTAL STUDENTS.

41.7% of Dental Students in Tamilnadu and 35.2% of Dental students in Andhra Pradesh are fairly confident on reliability on information availability in internet.

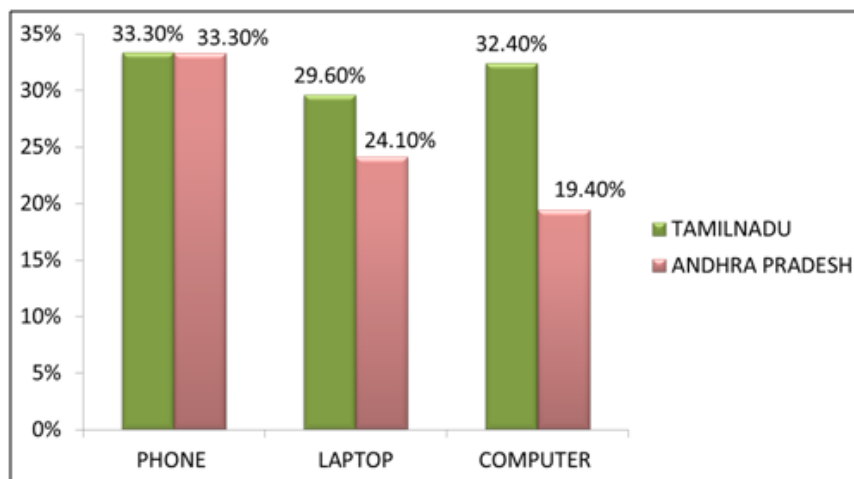


FIG. 3: MODE OF INTERNET USAGE

DISCUSSION: Various surveys have been conducted on Computer Knowledge and Information Technology among the dental, medical and nursing students. Many studies showed the comparison between pre-clinical and clinical students, Age groups and Gender. But, the present study shows a comparison of computer knowledge of Dental students of two different states in India.

Though having limited internet access in colleges, 98.4% of Dental students in Tamilnadu and 95.4% of Dental students in Andhra Pradesh have access to the computers.

In the previous study by Lamis D. Rajab et al ⁶ 73.9% of students had access to the computers at home but in the present study shows that 72.2% of Dental students in Tamilnadu and 64.8% of Dental students in Andhra Pradesh have access to computers at home.

A proportion of 32.4% of Dental students in Tamilnadu and 40.7% of Dental students in Andhra Pradesh were not using computers regularly, which was little lower than the study conducted by Lamis D. Rajab et al⁶ were 44% students of their university are not using computers regularly.

73.1% of Dental students in Tamilnadu and 58.3% of Dental students in Andhra Pradesh have received adequate information technology (IT) training than assessment of word processing. But, in one of the survey IT skills tend to be lower than their assessment of word processing⁶.

The most popular use of computers was to display lectures as power point presentations. This seems to be general attitude of students in number of countries⁵⁻⁶. In the present study Dental students of two states use computers mostly for internet usage.

The study conducted by Lamis D. Rajab et al ⁶ majority of the students enjoyed the experience of using internet more often for pleasure than for academic reasons which is similar to the study conducted by Walmsley et al. In the present study, when compared to other skills in computer, Internet was used mostly for the academic purpose among the two states in India.

Further research is needed to explore the students use and acceptance of this technology for educational purposes and evaluate how their attitudes are likely to affect the implementation and success of new strategies of dental education with Internet-based learning⁸.

CONCLUSION: The present study concluded that dental students use computer for internet in academic purpose among two states and have adequate knowledge of information technology and the mode of usage of internet is through phone according to the recent trend. Though the Dental students use internet for academic purposes, the students should also be encouraged for updating the knowledge about Recent Researches, Journals and Review Articles.

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