



## A Survey of the Knowledge, Attitude and Practices in Research among Undergraduate Dental Students.

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### ABSTRACT

The aim of the study is to evaluate the knowledge, attitude and practices towards the principles of research among undergraduate and postgraduate dental students. Health research training forms an important part of education. It is essential to introduce positive attitude amongst dental students towards scientific research from the beginning of their career. This survey is done to assess the knowledge, attitude and practices regarding research activities among dental students and to encourage and motivate them in conducting researches. Research is not a separate speciality but it is a systematic approach of reasoning, analysing, documenting and reporting unusual clinical observations that we come across in everyday clinical practice. Hence, it is essential to inculcate critical thinking and reasoning skills and to develop a positive attitude amongst students towards scientific research from the beginning of their career.

**Keywords:** Principles of research, Knowledge, Attitude, Practices, Dental students.

### INTRODUCTION

Research is the foundation to improve health care. It is an integral part of the curriculum of most dental programs and some undergraduate courses in India.<sup>1,2</sup> Research in oral hygiene have short and long-term impact on the development of dental practice and the quality of the patient care which likely impacts the practice of dentistry.<sup>3</sup> Various activities have been introduced to motivate the dental students in research.<sup>4</sup>

Dental students in India are trained theoretically. But there seems to be a discontinuity between what is learned and what is being practiced in the clinics. The number of scientists has declined over the past two decades and there is a need for more clinical as well as basic health investigators. The role of undergraduate research assistants is thus more important.<sup>5,6</sup> Motivating students research activity can fill up the void of scientists and help developing countries to achieve self-reliance in health care and research.<sup>7</sup>

Some of the changes that may bring education to next level in India could be by motivating the students to participate in research curriculum and changing the method of learning. Research has changed the face of dentistry and has transferred the practice of dentistry over the last few years.

So far, survey has been conducted mostly among medical health care professionals to record the knowledge, attitude and practices on principles of research.<sup>8</sup> However, similar data among dental health care professionals are lacking. The purpose of this study was to assess the research related knowledge, attitude and practice among the undergraduate dental students.

### MATERIALS AND METHODS

#### Study design and data collection

This was a cross-sectional study. The study included 250 undergraduate dental students of Saveetha Dental College, Saveetha University, Chennai, Tamil Nadu. The students were asked to fill a pre-validated structured questionnaire on the principles of research.

#### Questionnaire had three parts

- Part one consisted of knowledge on research which was obtained by five questions having one correct and three false options. Students who chose the correct option were categorised to have good knowledge compared to others who chose the wrong answer.
- Part two of the questionnaire recorded the attitude of the students towards research in the form of a set of five questions. It was a yes or no question, students who chose yes were considered to have positive attitude whereas students who chose no were considered to have negative attitude.
- Part three assessed the research in practice by undergraduates. This section comprised of five questions. The answers required a dichotomous response of yes or no.

#### Statistical analysis

The collected data from questionnaire forms were entered into Microsoft office excel 2007 and was expressed in frequency and percentage.



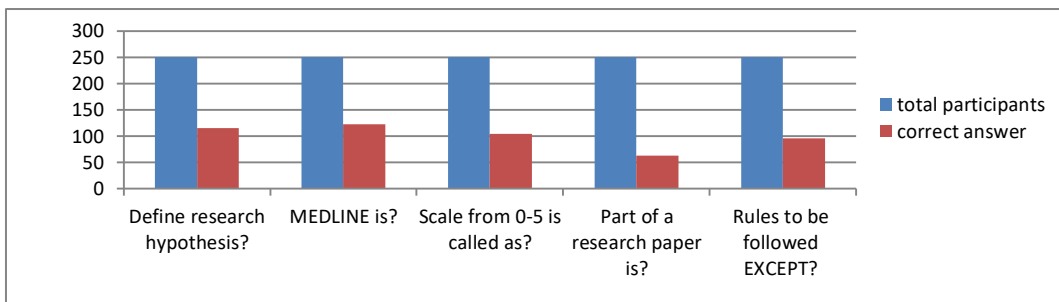
**RESULTS**

The study included 250 undergraduate dental students of different years who formed the sample size of the study.

(n=250). The knowledge, attitude and practices regarding the principles of research among dental undergraduates are displayed in tables below.

**Table 1:** Representing knowledge based upon the principles of research (n=250)

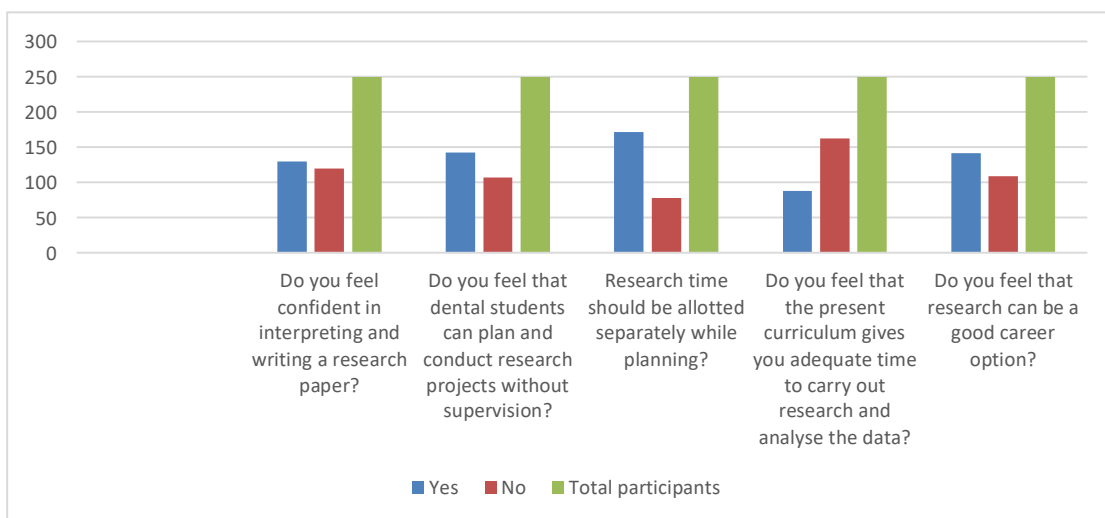
S. No.	Questions	Correct Answer	Frequency [%]
1	How do you define a research hypothesis?	115	46%
2	What do you think a MEDLINE is?	123	49.2%
3	A scale from 0-5 is called?	104	41.6%
4	The part of a research paper is?	63	25.2%
5	In writing an introduction section, rules to be followed EXCEPT?	96	38.4%



**Figure 1:** Representing frequency of knowledge based upon the principles of research

**Table 2:** Representing attitude based upon the principles of research (n=250)

S. No	Questions	Yes (%)	No (%)
1	Do you feel confident in interpreting and writing a research paper?	130 (52%)	120 (48%)
2	Do you feel that dental students can plan and conduct research projects without supervision?	143 (57.2%)	107 (42.8%)
3	Research time should be allotted separately while planning?	172 (68.8%)	78 (31.2%)
4	Do you feel that the present curriculum gives you adequate time to carry out research and analyse the data?	88 (35.2%)	163 (64.8%)
5	Do you feel that research can be a good career option?	142 (56.4%)	109 (43.6%)

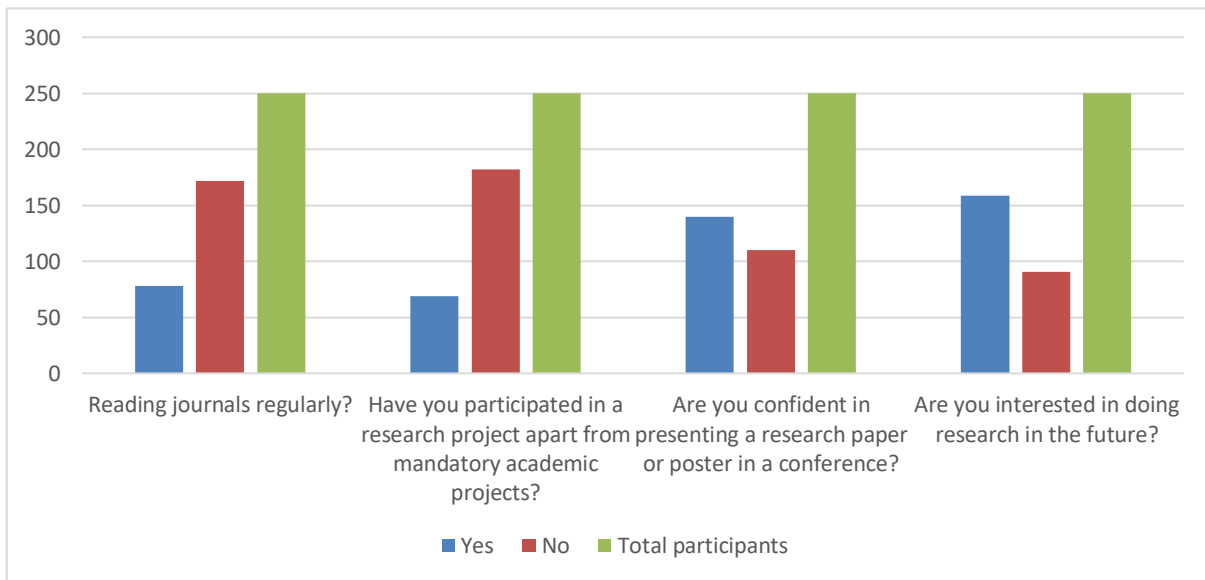


**Figure 2** Represent in frequency of attitude based upon the principles of research



**Table 3:** Representing practice based upon the principles of research (n=250)

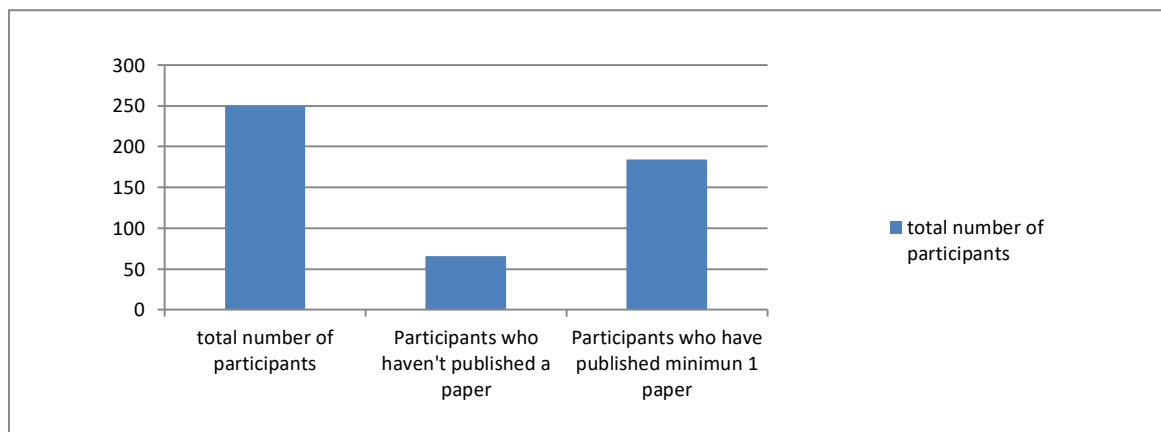
S. No.	Questions	Yes (%)	No (%)
1	Reading journals regularly?	78 (31.2%)	172 (68.8%)
2	Have you participated in a research project apart from mandatory academic projects?	69 (27.6%)	182 (72.4%)
3	Are you confident in presenting a research paper or poster in a conference?	140 (56%)	110 (44%)
4	Are you interested in doing research in the future?	159 (63.6%)	91 (36.4%)



**Figure 3:** Representing frequency of practice based upon the principles of research

**Table 4:** Representing the number of research papers the students have published (n=250)

Question	Option A (0)	Option B (1)	Option C (2)	Option D (>2)
How many research papers have you published?	66 (26.4%)	83 (33.2%)	50 (20%)	51 (20.4%)



**Figure 4:** Representing the number of research papers the students have published

Overall, around 26.4% of the students haven't published one paper also. Whereas, 73.6% of the students have published a minimum of one paper.

**DISCUSSION**

A basic familiarity with research methods is required for competent medical and dental practice. The best way to



attain this familiarity is by participating in researches.<sup>3</sup> Therefore it is for the dental students to know the basic principles of research methodology and a basic knowledge of biostatistics. Since there is not much study done in dental students, a comparison has been made with similar studies done in medical literature.

This study was a questionnaire based survey which included undergraduate dental students. In our study it was confirmed that, undergraduate dental students had good knowledge about the principles of research as more than 50% of correct responses was given for the questions based on knowledge of principles of research. This could be due to the fact that, Saveetha University enforces the students to attend the research methodology workshop conducted under its umbrella.

Our findings were similar to the study conducted by Pawar et al<sup>9</sup> at Department of Pharmacology, Seth GS Medical College, Mumbai to evaluate the awareness about medical research among resident doctors in tertiary care hospital with 100 participants and Madhavrao et al<sup>10</sup> with 26 medical postgraduates at the Department of Physiology in Kanyakumari District.

In our study, 52% students were confident in interpreting and writing research paper, 57.2% students feel that they can plan and conduct research projects without any supervision and 56.4% of the students feel that they research can be a good career option. 68.8% of the students feel that time should be allotted separately while planning research work and 64.8% of the students feel that they do not have adequate time to carry out their research and analyse the data.

Our findings were similar to the study conducted by Madhavrao et al<sup>10</sup> where 53.7% of the students showed good attitude towards the principles of research among the students.

On evaluating practice on research work, 31.3% of the students were reading journals regularly, 27.6% of the students participated in research projects apart from mandatory academic projects, 56% of the students were confident in presenting a research paper or poster in a conference and 63.6% of the students were interested in doing research in the future.

In our study, 26.4% of the students haven't published any research paper, 33.2% of the students have published one paper, 20% of the students have published two and 20.4% of the students have published more than two. So on a whole, 73.6% of the students have published a minimum of one research paper. This shows the interest of the students towards research work. Therefore, overall participation of the students towards research practice was found to be excellent.

## CONCLUSION

In conclusion, we report moderate knowledge and good attitude with good practice towards principles of research among undergraduate dental students of Saveetha Dental College. More than half of the students were interested in doing research projects in the future and many feel that research could be a good career option. Almost two third of the students have published a minimum of one research paper.

Based on our observation, following recommendations can be made to improve the state of research in undergraduate dental students. Adequate time should be allotted for the students apart from their regular curriculum to do their research work. Students should be encouraged to participate in research projects apart from mandatory research projects.

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