



A Cross-Sectional Study to Assess Knowledge, Attitude and Practice of Research Opportunities and Challenges among Medical and Dental Interns in Central India

**Prachi Jawade¹, Amit Reche^{1*}, Kumar Gaurav Chhabra¹,
Priyanka Paul Madhu¹, Vedanti Kitey¹ and Gunjan Hiware¹**

¹Department of Public Health Dentistry, Sharad Pawar Dental College, DMIMS (Deemed to Be University), Sawangi (Meghe), Wardha 442001, Maharashtra, India.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Background: Access to research and knowledge in medical and dental schools are useful for encouraging critical thinking, turning practitioners into researchers, and initiating training for new medical researchers.

Objectives: To evaluate knowledge, attitude and practice about the research challenges and opportunities among medical and dental interns.

Methodology: This study is an online based cross-sectional study. The participants of this study include 300 interns from institution in Central India.

Expected Results: Dental and medical knowledge is highly dependent on underlying, clinical and transitional conditions to provide clinicians with new early detection methods, better preventive treatments and effective intervention strategies. The knowledge and perception of the students regarding research will determine the interest and their innovative skills towards the future development of medicine. Hence, the implication of this study will promote having comprehensive ideas towards quality research among the students during their basic academic level.

Conclusion: The questionnaire had good trustworthiness and showed that there are average opportunities for medical and dental interns.

Keywords: Research opportunities; dental and medical research; medical and dental interns; research challenges.

1. INTRODUCTION

Research exposure and knowledge in medical and dental schools are useful in stimulating critical thinking, encouraging practitioners to actively use the literature, initiating training for future medical researchers [1]. People who actively participate in research are more likely to complete vocational study and likelihood to become teachers, contributing to future research [2]. The most important tool for accumulating knowledge is research. Dental and medical research knowledge is highly dependent on underlying, clinical and transitional conditions to assist clinicians for developing new early detection methods, better preventive treatments and effective intervention strategies [1]. Priorities for research vary depending upon the disease burden and socioeconomic conditions [3]. However, an important point in dental education is to recognize elements that promote or hamper student to take part in research [2]. An effective measure is to treat students directly participate in research funding institution.

Research programs in medical and dental schools are key tools for biomedical and clinical research, serve as effective teaching and learning tools, and create an environment for graduate students to develop problem solving and critical thinking skills [4]. It is only when there is individualized and hope that the gain of new knowledge and adapt to changes in practice and profession that will be required in future [5].

Limited level of knowledge to conduct research and very low practice are considered barriers. The majority of students are convinced that conducting research is exhausting and stressful [6]. Health sciences research and new scientific innovations are currently guiding clinical practice and becoming an essential part of medical education [7]. By incorporating research in their educational systems, medical schools promote a pool of researchers and allow students to acknowledge their career prospects [8].

1.1 Background/rationale

The findings of this study will help medical and dental interns to reach out to the maximum opportunities for research programmes in more

meaningful ways with the help of questionnaire designed in this study.

1.2 Objectives

- 1) To evaluate the knowledge attitude and practice about the research challenges and opportunities between medical and dental interns.
- 2) To correlate the knowledge, attitude and practice particulars obtained about the research challenges and opportunities through questionnaire between the two subgroups (medical and dental interns)
- 3) To evaluate the comparison of the knowledge, attitude and practice from the data obtained through questionnaire between the two groups medical and dental interns.

2. METHODS

This study is an online based cross-sectional study conducted at Sharad Pawar Dental College shall be undertaken. The participants of this study include interns from Sharad Pawar Dental College and Jawaharlal Nehru Medical College Sawangi (M) Wardha. A Special form is designed to record all the required relevant information. The questionnaire will be used as a tool for data collection and evaluation. Closed ended questions are structured with few open questions to allow free response. The pilot study will be conducted consisting of all interns of SPDC and JNMC. The knowledge and attitude of study subjects will be assessed by using a questionnaire method. The questionnaire comprises of total 28 questions are divided into following 3 categories as:

Knowledge based questions (12 questions),

Attitude based questions (08),

and

Practice-based questions (08)

2.1 Inclusion Criteria

- Participants given consent for the survey
- Age group 20 to 30 years
- Medical and dental interns in central India

2.2 Exclusion Criteria

- Participants not granted consent.
- Age group <20 to >30 years

2.3 Measurement

The questionnaire is based on respondents' knowledge, attitude and practice towards the research challenges and opportunities. The questions used in practice and attitude will be graded using a five-point Likert Scale. Participants will be asked to complete a questionnaire in a particular period and then the results are analysed and compared.

Bias: All the potential sources of bias has been removed.

Quantitative variables: SPSS software version 22 will be used for frequency distribution and descriptive statistics. The data will be collected (MS Excel, MS Office), and statistical test of Pearson's correlation analysis and chi square test was used to measure associations of qualification, gender, Age and dental institutions with knowledge, attitude, and behaviour of study participants.

3. EXPECTED OUTCOMES/RESULTS

Dentistry relies majorly on basic, clinical and speciality conditions to ensure clinicians with new early diagnostic tools, improved preventive treatment, and effective interventions programs. The knowledge and perception of the students in medical profession regarding research will determine the interest and their innovative skills towards the future of medicine. Hence, the implication of the study will promote having comprehensive ideas towards quality research among the students during their academic level.

4. DISCUSSION

According to Baum BJ et al research is fundamental to the mission of dental education. Specialised tools for dental, oral and craniofacial research are available in dental training to improve the integration of research into the educational environment. The constraint will be shortage of manpower for teaching or research positions in certain parts of the world [9].

Ravi V. Shirahatti et al used DSRI questionnaire to compare the research opportunities among the undergraduate and postgraduate dental

students. The questionnaire showed good consistency for post graduates and average reliability for undergraduates. In general, postgraduate students obtained better research opportunities as compared to undergraduate students who see many opportunities [2].

Rosenstiel SF et al compared in their review articles about the costs and goals of the program and compare the carrier choice and financial donations of dental alumni who received student research experience to the class as a whole. That will end—after seven to ten years, researchers were more than three times more probably to complete specialty training (50 % vs. 15%), almost five times more probably to become full-time faculty teachers (5 % vs. 1.1%), and 31 % more probably to be financial sponsors of schools than their entire class (42 % vs. 32%) [10].

According to Warner B et al, the structured study programs in which graduate students can get involved are of two types: dual degree programs and summer research programs. The dual degree dental researcher training grant and individual NIH/NIDCR F-30 award. This funding mechanism is the most compelling example of integrated predoctoral research and is actively targeted at students interested in academic and research careers [11].

According to Kumar Gaurav Chhabra et al, Faculty and post-graduates' students are involved in research projects, but there is fistful of dental colleges in India where undergraduates are involved in research activities, nevertheless the present institution is one of them.

According to Osman T. Studies suggest that early exposure to research, specifically at the undergraduate level, can be considered as a natural catalyst in building a solid medical education for students.

4.1 Generalizability

The study has a good external and internal validity.

5. CONCLUSION

The skills in research are widely utilized for the promotion of growth in scientific development. The students pursuing medical and dental courses require good knowledge in research

activities during their academics for better evolution of different ideas. Hence this study will allow to understand the importance of various research opportunities and challenges being faced by the students to overcome the problems and adding new sessions for their scientific development.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The study will have approval from the Institutional Ethical Committee.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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