



**ORIGINAL RESEARCH PAPER**

**Oral Pathology**

**A REVIEW ON KNOWLEDGE OF UNDERGRADUATE DENTAL STUDENTS TOWARDS RESEARCH**

**KEY WORDS:** Research, Undergraduate Dental Students, Knowledge, Barriers, Curriculum.

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**ABSTRACT**

Research is defined as “ a systematic inquiry to describe, explain, predict, and control the observed phenomenon. It involves inductive and deductive methods”, According to the American sociologist Earl Robert Babbie. Research application in the medical and dental sectors has grown in prominence and is currently being encouraged, particularly among undergraduate students. The past ten years have seen a significant expansion in the field of dentistry due to the introduction of several novel problems, solutions, and techniques. Regrettably, there is a present talent gap for dental scientists, and the talent market for dentists is becoming less competitive. In a study it was quoted that about 85% of dental graduates opted for private practice over employment in research. This review article covers the importance of Research methodology knowledge in the Undergraduate Dental Students and the Barriers stopping the students from acquiring it.

**INTRODUCTION**

Research is a methodical procedure that use accepted standards to produce new knowledge, science, or invention.<sup>[1]</sup> Research application in the medical and dental sectors has grown in prominence and is currently being encouraged, particularly among undergraduate students. The past ten years have seen a significant expansion in the field of dentistry due to the introduction of several novel problems, solutions, and techniques. The dentists must possess sufficient fundamental knowledge and clinical expertise in addition to staying current with developments and trends in the dentistry industry and implementing them effectively.<sup>[2]</sup> This review article covers the importance of Research methodology knowledge in the Undergraduate Dental Students and barriers stopping the students from acquiring it.

**Research – A Blooming Field**

By expanding basic understanding of dentistry and producing new concepts, theories, and ideas, advances in dental basic research have significantly improved dental diagnosis and treatment.<sup>[3]</sup> Research is a technique for students and academics to put the knowledge they learned from books into tests and come to fresh findings or validate the falsity of existing truths, not just in the medical area but in every other field as well.<sup>[4]</sup> Research guarantees subject comprehension and enhances students' knowledge. Strong research expertise is required to understand the notion of evidence-based medicine, and that can only be attained via experience. Nobody disputes the value of research in the medical field, yet the undergraduate Indian medical curriculum still does not place much emphasis on it.<sup>[5]</sup> In earlier days, the word Research is confined to only the PhD scholars, but now it's not the case. Anyone and everyone can be involved in the Research process. Even Government itself taking many measures and providing new opportunities for both School Students and Graduates to gain Research knowledge for the betterment of Nation, which clearly indicates that Research is very vital for the Development to occur in any field.

**Curriculum Vs Research**

It was suggested during a world conference on dental education in September 2007 that "it should become a norm that some level of research required should be part of the undergraduate curriculum."<sup>[6]</sup> As obligatory component of the college core curriculum, research knowledge is needed. The course's objectives are to introduce students to the fundamentals of scientific research and biostatistics through a variety of problem-solving activities and to provide them with the skills they need to effectively participate in a range of institutional research projects. Students gain knowledge about how to formulate research questions, create research

hypotheses, evaluate literature critically, design studies, gather and analyze data, and produce thorough project reports while working on their research projects. Although it is not required, students are urged to present their research at conferences and publish it in medical publications.<sup>[7]</sup> Curriculum is a major part in learning in Colleges, so it is important to indulge Research in this part to impart a natural development of interest of the Students towards research.

**Barriers For Students In Research**

A culture of research among healthcare professionals, including students, is influenced by a number of factors. The first and most crucial factors in starting a scientific study are the students' beliefs and knowledge, followed by their interest in the subject, their level of curiosity, and their motivation to find an answer to an open-ended question or problem.<sup>[1]</sup> The absence of college courses, technique issues, lack of motivation, workload, knowledge gaps, a lack of mentors, personal and familial obligations, and other factors have all been mentioned in the literature as obstacles to dental professionals conducting research. Yet, many researchers have found it to vary in percentage.<sup>[8]</sup> Regrettably, there is a present talent gap for dental scientists, and the talent market for dentists is becoming less competitive.<sup>[9,10]</sup> According to a 2020 American Dental Education Association (ADEA) study of graduating dental students, 85% of dental graduates opted for private practice over employment in research.<sup>[9,11]</sup> Students often struggle to find scholarships to help them pay for their education. For their continued education, students from lower socioeconomic backgrounds rely on loans or grants. As a result, the financial burden significantly impedes students' ability to learn and do research.<sup>[6]</sup> It will be more effective when the research process is linked with the Student's favorite subject and the field of interest, instead of compulsarily including research in curriculum designed by the College or Universities.

**Impact Of Research On Future Dental Education**

"Basic research" is defined by the head of the US Office of Scientific Development and Research as work that advances knowledge and comprehension of a subject or specific natural occurrence, primarily in the natural sciences.<sup>[9]</sup> The majorities of dental undergraduate students were aware of the value of scientific research and were enthusiastic about conducting research projects in the future. Dental students, research curriculum, and projects on student behavior are all aided by the dentistry curriculum. Significant supervisory responsibilities and a rigorous research training programme integrated into a structured undergraduate dental curriculum have been identified as the key influences on students' attitudes towards research.<sup>[12]</sup> Research will definitely change the present knowledge of Students acquired in Dentistry to

next level and will surely make revolutionary changes in the field of Dentistry.

## CONCLUSION

A crucial component of medical education should involve scientific research. To help undergraduate students develop a positive attitude towards scientific research, it is crucial to instill the skills of critical thinking and reasoning.<sup>[1]</sup> However the vast majority of students showed a favorable attitude and moderate awareness of research. But a lack of familiarity with research terminology and practices points to the necessity of thorough instruction and sufficient funding for the execution of research activities at the undergraduate level.<sup>[2]</sup> Though there are many institutions actively involving Students in research process, the obstacles encountered by the Students are to be evaluated keenly and to be rectified for better progress of Dental Undergraduate Students in the Research field.

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