

## REASONS FOR LACK OF RESEARCH IN DENTISTRY; A CROSS SECTIONAL SURVEY ON DENTISTS AND STUDENTS IN TEACHING HOSPITALS OF PAKISTAN

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### **ABSTRACT:**

#### **OBJECTIVES:**

*The purpose of this study was to determine the barriers or factors preventing dentists from engaging in research in teaching institutes of Pakistan.*

#### **METHODOLOGY:**

*The descriptive, cross sectional online survey was conducted at the department of Prosthodontics, Rehman College of Dentistry, Peshawar over a period of six months. Sample size of 780 was taken in the descriptive study and questionnaires were communicated through emails and the response was noted. The data was analyzed using the IBM SPSS statistic version 20. Statistical analysis was done using counts and percentages and the results were further analyzed statistically by the Chi square test.*

#### **RESULTS:**

*Completed surveys were collected from 280 participants. Completed surveys were collected from 780 dentists, 40.7% were male and 59.3% were female. Participants' age ranged between 20-50 years; about half of them (55%) were younger than 30 years of age. Other demographic characteristics of the participants such as designation, work experience, and qualification given in Table 1 were also recorded. Majority of the participants were dentists (35%), followed by senior registrar (10%) and assistant (10.7%), associate (and professors (4.3%). Details are depicted in Table 1. Overall, 47.9% participants were found to be involved in research and having publications. Simple graduates were more in number as compared to postgraduates. When inquired about publication published in an indexed journal or not 22.1% responded with yes and 46.4% responded with No. 65% participants had received workshops for writing papers and only 34.3% institute conducted continuous training programs. The main reason reported for lack of research was lack of motivation and don't know how to do it. Other less common factors were lack of funds and no professional benefits as depicted in Table 2.*

#### **CONCLUSION:**

*Identifying and minimizing all the barriers in the way of research may help dental authorities to intervene for enhancing research friendly environments.*

**KEYWORDS:** *Research, Dentist, Students, Skills, Survey*

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**INTRODUCTION:**

Research is not a distinct discipline, but is a comprehensive approach to reasoning, evaluation, review and the recording of unusual clinical findings contained in routine clinical practice<sup>1</sup>. In each area of health care, improving quality initiatives is a necessary prerequisite. However, progress should be scientifically geared to prosper with the preceding acts established. Dentistry has seen comparable breakthroughs that have allowed it to advance based on proof. Not only does the wreckage of selected evidence rely on high quality and sound dental practice, but also on compelling research evidence<sup>2</sup>. Evidence based practice because of the research not only helps to improve the clinical skills of the clinicians but also modify the way of thinking of the students, and make their approach, thinking critically, improve their problem solving skills, polish their decision making skills and help them improve their clinical practice skills. Researchers are able to update their knowledge and skills to the latest approaches in dentistry and are able to provide opportunities to explain cognition and performance related issues<sup>1</sup>.  
<sup>2</sup>. Research is a systematic process in which fresh understanding; science or invention can be achieved through the use of conventional guidelines. Health care study is used for disease prevention, diagnosis and therapy as well as health care policies. According to the UNESCO Institute of Statistics, only 27% of the world's total health scientists are situated in developing nations and only 1.2% of annual health studies are attributable to South Asia. Even worse, Pakistan's contribution to global study journals accounts for less than 0.04% including health science journals<sup>3,4</sup>. The lack of attention to research by well-educated community members and the government leads to science and understanding lags in society. For health policy makers and scholars, linking research and teaching is essential. This has brought

emphasis to certain people on the need to teach university learners in a research-based learning setting among suppliers of healthcare, including learners. Students have the faith and expertise in setting up a science survey and the interest and curiosity of the learners in a topic and their willingness to solve a question or issue that they do not have answers<sup>5</sup>. However, other than appropriate understanding and curiosity, there are certain obstacles that need to be resolved in order to promote study culture in institutes. These aspects, such as absence of funds, finding a mentor, etc., are disabilities that stop learners from pursuing their interest in scientific research<sup>6,7</sup>. Many international studies have identified several factors contributing to lack of research in dentistry. However there is little data available regarding the reasons for lack of research among dental practitioners in teaching institutes of Pakistan. Identifying the difficulties, reasons and barriers can help in focusing on those specific areas, which will ultimately encourage dentists to be more involved in research, broaden the scope of research, and create a more conducive environment for research.

**METHODOLOGY:**

Permission to carry out the study was obtained from the head of the institute, and ethical clearance was obtained from the Institutional Review Board of the Rehman College of Dentistry, Peshawar. The research data was collected through online questionnaires from dental colleges/hospitals of the country. The descriptive, cross sectional online survey was conducted at the department of Prosthodontics, Rehman College of Dentistry, Peshawar over a period of six months. A total 780 Dentists were recruited from different teaching institutes of Pakistan. The consultants, specialists, general practitioners, third year and fourth year residents, and clinicians with a minimum of two years working experience were included in the study. The exclusion criteria were first-year and second-year residents and part-time clinicians. The primary outcome of the study is to determine barriers toward conducting research among dentists. Non-probability convenient sampling technique was used. Participation in the research was with no incentives for the respondents and on a voluntary basis. A questionnaire was designed to incorporate barriers in relation to research that were identified in previous studies but with minor modifications. Then, face validation of the questionnaire was done with the help of the research and biostatistician team. In all, the survey instrument consisted of 5 questions, close-ended,

and self-administered questions. The response format was categorical e.g. yes/no, or by choosing (an) appropriate response(s) from given options. The questionnaires consisted of two parts: Part I had demographic details of the participants (age, gender, dental specialty, rank of occupation, place of work, academic affiliation, and work experience), and three questions about past

research experience. The Part II comprised questions about reasons for lack of research in dentistry. The questionnaire was sent to 983 participants in whom 780 participants responded. The data was analyzed using the IBM SPSS version 20. Statistical analysis was done using counts and percentages and the results were further analyzed statistically by the Chi square test.

## RESULTS:

**Table 1: Demographics**

Characteristics	Percentage	
Gender	Male	40.1%
	Female	58.5%
Experience	2-5 Years	52.9%
	6-10 Years	30.7%
	11-15 Years	7.1%
	>15 Years	9.3%
Qualification	BDS	50.7%
	Postgraduate	49.3%
	Dental Surgeon	35%
Designation	Senior Registrar	10%
	Assistant/Associate Professors	10.7%
	Professor	4.3%

**Table 2: Percentages of Reasons for Lack of Research**

Questions	Answers
1 Do you have any publications?	Yes (47.9%) No (52.1%)
2 Was the journal of your publication an indexed journal?	Yes (22.1%) No (46.4%) Maybe (8.6%) Don't Know (22.9%)
3 Have you ever-received training or a workshop for understanding or writing a paper?	Yes (65%) No (35%)
4 Are there any continuous research training programs in your institute?	Yes (34.3%) No (65.7%)
5 What do you think is the main reason for lack of research in the dental community?	Don't know how to do it (25%)
	Boring job (3.5%)
	Lack of funds (12.1%)
	Lack of motivation (32.9%)
	No professional benefits (4.3%)
	Busy schedule (19.3%)
	Others (2.9%)

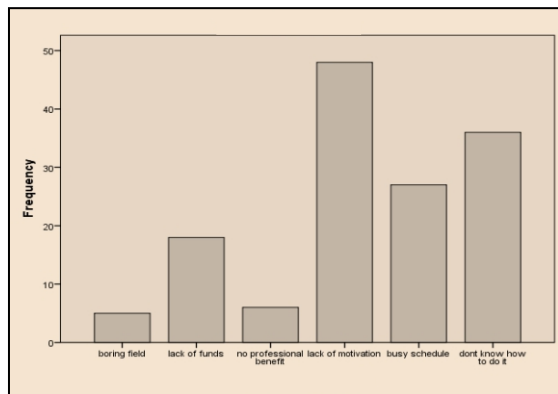


Figure 1: Reasons for Lack of Research

## DISCUSSION:

In the past few decades, all kinds of research have witnessed great progress and research is considered critical to improving the level of health care delivered. To the best of our knowledge, this study is the first attempt to explore the attitudes of the practicing dentists toward research in general and specifically about the hurdles they encounter when engaged in research at different stages. The findings of the study are interesting and supportive in which the majority of respondents, much like previous surveys, had a positive outlook toward conducting research. The majority of dentists sampled were involved in research either as a graduate and/or a postgraduate. Most dentists sampled were involved in research either as a graduate and/or a postgraduate. However, 52% of the participants reported that they are supposed to focus more on the quality of clinical work rather than research, resulting in negligible research activity (Table 2). Likewise researchers reported that research among dentists is neglected<sup>8,9</sup>. The number of female dentists working at teaching institutes, was more than double that of males (Table 1), contrary to another study where research involvement among female physicians was significantly lower as compared to males<sup>10</sup>, with significant differences in terms of attitudes related to involvement in research was seen from current study, contrary to another study reported non-significant gender effect<sup>11,12</sup>. The study participants had average work experience of 10 years and though two third of the study population were working in the tertiary dental care setting, where one would expect more research opportunities. Interestingly, in our study, no significant association was seen between years of experience or seniority level and the willingness to be involved in research (Table 1). It is observed that

age makes a difference in the enthusiasm for doing the research. Youngsters have more energy and enthusiasm as compared to aged ones<sup>13</sup>. Identifying and then taking care of the barriers between the research and the dentists can decrease the ratio of lack of research in the field<sup>14</sup>. Our study revealed several institutional, departmental, and financial barriers that can lead to a non-friendly research environment. The main impediment reported was lack of motivation 32%, and time limitation 19.3%<sup>15</sup>. Most of the respondents supported the idea of allotting separate time to conduct research when planning dentists' workload. This agrees with many other studies done at different parts of the world<sup>16</sup>. We also found that 19.3% of the dentists have no time left to conduct research after spending most of the working time in clinical work and administrative work (Table 2). In addition 4.3% stated that undertaking research work is not part of their job description and it has no professional benefits. These results show that maximizing the productivity of research is achievable only by considering research as a professional activity equivalent with other clinical and/or administrative responsibilities given to the dentist<sup>17</sup>. In developing countries, financial constraints become one of the biggest hurdles in the way of good quality research in the field of dentistry. 12.1% of the study participants stressed upon the importance of being supported by funding agencies (Figure 1). In fact, lack of funds was identified as the third major barrier in our study. Similarly, literature reported lack of proper funding as one of the biggest obstacles facing research in all fields including clinical and educational research<sup>18</sup>. The residents of post-graduation also showed interest in the research if they are funded and given separate time for it<sup>19</sup>. Other barriers such as lack of documents and lack of administrative/technical support were also reported by 2.9% of the respondents respectively (Figure 1). In addition, lack of clear guidelines and policy for research activity made 25% of participants don't know whom to contact. These figures are comparable to those reported to solve this problem, institutions should make research cells in their vicinity consisting of full teams of research experts, and the experts should be given extra incentives for it so that they may work efficiently<sup>20</sup>. The study gives insight to the research related problems of dentists who are currently working at different levels. These findings can be used for designing future studies as well as commend larger multicenter studies in order to have the actual insight to the research status among dentists.

**CONCLUSION:**

Majority of surveyed dentists considered research useful for their profession and showed optimistic attitudes toward conducting research. These findings provide an insight towards the willingness to participate in research, which could be used to bring dentists together and researchers in a collaborative network. Having those networks of dental practice in the provision of quality care would be of considerable advantage. The participating dentists, however, considered it hard to conduct research and highlighted those challenges. Identification of those barriers may help dental authorities to intervene for enhancing research-friendly environments.

**LIMITATIONS:**

The limitations of the study included the response bias, as some participants might have under or over reported on a few items, because the data was collected during their routine working hours through an online questionnaire. Still effort was done to include all types of staff working in the setting so as to minimize the effect of one group specifically over or underreporting on the research difficulties.

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