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"The Unseen Layer of Research" The Hidden Forces Behind Topic Selection Among Post Graduate Students

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ABSTRACT:

Background

Selection of a research topic is a crucial step in the research process and is influenced by several personal, academic, ethical, and practical factors. Understanding these factors helps promote meaningful and feasible research.

Aim

To assess the factors influencing research topic selection among postgraduate dental students in Telangana.

Materials and Methods.

A cross-sectional study was conducted among postgraduate dental students from six dental colleges in Telangana using convenience sampling. Data were collected through a self-developed, validated questionnaire consisting of demographic details and 15 statements measured on a 5-point Likert scale ranging from "not important" to "very important." The questionnaire was grouped into six domains. Data collection was carried out from September to October 2025, and the responses were analysed using SPSS version 25.0.

Results

A total of 230 valid responses were analysed. Guidance from professors (47.8%), availability of literature (48.2%), and ethical considerations (48.7%) were predominantly rated as very important. Relevance to the current scenario (43.9%), publication potential (42.1%), and future career opportunities (34.6%) were also highly valued. Domain-wise analysis revealed that relevance and future potential had the highest mean score (4.12 ± 0.91), followed by feasibility constraints (4.09 ± 0.91), ethical considerations (4.07 ± 0.91), and guidance (4.06 ± 0.95).

Conclusion

Research topic selection was mainly influenced by future relevance, feasibility, ethical considerations, and academic guidance. Participants preferred research topics that were practical, ethically feasible, publication-oriented, and beneficial for future academic and professional growth.

KEYWORDS: research, post graduate students, topic selection

I. INTRODUCTION

Research is a systematic, scientific, and organized process of generating new knowledge, verifying existing information, and solving practical or theoretical problems. It serves as the foundation for academic advancement, professional development, innovation, and evidence-based decision-making. In higher education, research is considered an essential component of undergraduate, postgraduate, and doctoral programs, enabling students to develop critical thinking, analytical abilities, and problem-solving skills.

One of the most crucial stages in the research process is the selection of a research topic. The research topic acts as the cornerstone upon which the entire study is built, influencing the formulation of research objectives, methodology, data collection procedures, analysis, and interpretation of findings. The quality, relevance, and feasibility of a research project largely depend on the appropriateness of the selected topic. Consequently, choosing a suitable research topic is often regarded as an important step toward conducting successful research.[1]

The rapid expansion of scientific knowledge, technological advancements, and interdisciplinary research has further increased the complexity of topic selection. Researchers are required to identify relevant and meaningful areas of investigation while considering the existing literature, availability of information and resources, feasibility, time, and practical considerations. Therefore, selecting a research topic requires careful consideration of its relevance, originality, practicality, available resources, and potential contribution to existing knowledge.[2]

Despite its importance, topic selection remains a challenging task for many students and novice researchers. Previous studies have reported that students experience difficulties in identifying,

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narrowing, and developing suitable research topics. Challenges may arise from inadequate research knowledge, limited exposure to research, difficulty identifying research gaps, personal interests, and insufficient supervisory guidance.[3]

Several studies have highlighted the importance of understanding the process of research topic selection and the factors associated with it. Research has identified personal considerations, the nature of the topic, information resources, and research operability as important dimensions influencing topic selection, with research operability being identified as a particularly influential factor. Other studies have emphasized the role of personal interests, previous research on the topic, research knowledge, research exposure, and supervisory guidance.[3]

In addition, appropriate topic selection requires consideration of whether the proposed research is time-bound, objective, feasible, innovative, interesting, contemporary, and ethically acceptable. Such considerations can help researchers, particularly postgraduate and doctoral students, select topics that are manageable and meaningful within the available academic and practical constraints

In the contemporary academic environment, where research output is increasingly linked to educational quality and professional development, investigating the process of research topic selection has become highly relevant. Understanding the factors that influence topic selection can assist students, supervisors, and educational institutions in developing strategies that facilitate effective research planning and execution.[3]

Therefore, exploring the various considerations involved in selecting a research topic is essential for promoting meaningful, feasible, innovative, and impactful research. This study aims to provide an overview of research topic selection and examine the factors that influence researchers when choosing a topic for academic investigation.

II. METHODOLOGY

A cross sectional descriptive research design was adopted to assess factors influencing research topic selection among dental post graduates in various dental colleges of Telangana India.

A self-developed, structured questionnaire was utilized for data collection. The instrument consisted of 15 statements derived from an extensive review of the literature, which were measured on a 5-point Likert scale ranging from “not important” to “very important.” These statements were organized into six domains to comprehensively assess the different aspects of the study construct. The questionnaire underwent both content and face validation by experts who were involved in dental post graduate teaching prior to administration. Content validation index was 0.89

Post graduate students from various colleges were included using convenience sampling. 6 dental colleges granted permission to participate. Postgraduate students who were willing to participate in survey during the period of data collection were considered eligible for participation. The researcher visited the dental colleges that granted permission and recruited postgraduate students.

A convenience sampling method was employed for participant recruitment. Eligible postgraduate students from 6 dental colleges in Telangana which granted permission were included in the study. Recruitment continued until the required overall sample size was attained. The number of participants recruited from each institution was not predetermined and depended on the availability and willingness of eligible students at the time of data collection.

Informed consent was implicitly obtained from all the participants through their completion and submission of study questionnaire

The study was conducted over a period of two months, from September to October 2025. The sample size (n = 310) was determined based on a pilot study. Data were collected through a structured, self-administered questionnaire distributed via google forms after obtaining institutional permission. Reminder emails were sent to improve the response rate. The analysis was done using statistical package for social services (SPSS) Version 25.0

III. RESULTS

A A total of 230 valid responses were analysed to evaluate the factors influencing the selection of a research topic.

Table 1 presents the percentage distribution of responses across different levels of importance for each individual factor. The majority of participants rated ethical considerations (48.7%), availability of literature (48.2%), and guidance from professors (47.8%) as *very important* factor for selecting a research topic. Although personal interest and prior knowledge were also recognized as important factors, support from peers received (38.6%) lower importance.

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Table 2 summarizes the domain-wise mean scores (Mean ± SD). Among all domains, relevance and future potential recorded the highest mean score (4.12 ± 0.91), indicating that participants strongly prioritized selecting topics aligned with current trends, publication prospects, and future career benefits. This was closely followed by feasibility constraints (4.09 ± 0.91), reflecting the importance of practical considerations such as time, cost, availability of resources, and technology.

Table 1: Distribution of participants according to factors influencing research topic selection based on level of importance

Domain	Variable	Not Important (%)	Slightly Important (%)	Moderately Important (%)	Important (%)	Very important
Personal considerations	Personal Interest	1.3	14.0	18.4	43.4	22.8
	Prior Knowledge	1.3	2.6	18.9	52.6	24.6
Guidance	Support from Peers	7.0	5.7	18.9	38.6	29.8
	Guidance	0.0	3.1	8.8	40.4	47.8
Feasibility constraints	Available Technology	2.2	4.8	7.5	51.3	34.2
	Cost	9.0	7.5	10.5	41.7	39.5
	Time	1.8	6.1	19.3	45.6	27.2
	Literature	4.0	5.3	13.2	32.9	48.2
Community development	To Fill Research Gap	2.2	9.6	14.5	49.1	24.6
	Solve Problems	0.0	8.8	16.7	35.1	39.5
Ethical considerations	Institutional Requirements	1.8	10.1	18.4	43.4	26.3
	Ethical Considerations	0.0	2.6	9.2	38.6	48.7
Relevance and future potential	Future Opportunities	2.2	3.5	11.8	47.8	34.6
	Publication	1.3	6.1	17.5	32.9	42.1
	Current Scenario	0.0	3.9	17.5	34.6	43.9

Table 2: Domain-wise mean scores of factors influencing research topic selection among postgraduate dental students

Domain	Mean ± SD
personal considerations	3.84 ± 0.91
guidance	4.06 ± 0.95
feasibility constraints	4.09 ± 0.91
community development	3.95 ± 0.97
ethical considerations	4.07 ± 0.91
relevance and future potential	4.12 ± 0.91

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IV DISCUSSION

Selection of a research topic is an important first step in the research process and can influence the relevance, feasibility, and quality of the study. Postgraduate students may consider various factors in selecting a research topic. The present study assessed these factors and their influence on research topic selection among postgraduate students. This finding is consistent with Gul et al., who reported that a diversity of factors influence students while selecting a research topic, including personal experience and supervisor's area of expertise.4

The present study found that relevance and future potential was the most influential domain in research topic selection, with the highest mean score of 4.12 ± 0.91, followed by feasibility constraints (4.09 ± 0.91), ethical considerations (4.07 ± 0.91), and guidance from professors (4.06 ± 0.95). This indicates that postgraduate students primarily preferred research topics that were relevant to current issues, had potential for publication, and could contribute to their future academic and professional development. The preference for such topics may be because research addressing current problems and future needs is more likely to have scientific and practical value. Vaidyanathan highlighted that an appropriate research topic should be based on a meaningful research question and should consider aspects such as novelty, feasibility, relevance and potential contribution.5

The high mean score for feasibility constraints (4.09 ± 0.91) suggests that students also considered whether a proposed topic could realistically be completed with the available time, cost, literature, technology, and other resources. This may be particularly important for postgraduate students who need to complete their research within a defined academic period and available institutional resources. Luse et al. described research topic selection as a process involving preparation, identification of a research problem, and development of a research topic within an appropriate research area.6

Ethical considerations also showed a high mean score of 4.07 ± 0.91. The importance of this domain may be because postgraduate research, particularly studies involving human participants, must satisfy ethical and institutional requirements before implementation. Students may therefore avoid topics that are difficult to justify ethically or obtain approval for, even if they are scientifically interesting. Hashimi et al. emphasized the importance of defining the ethical limitations and boundaries of a research topic while selecting and developing the research problem.7

The high score for guidance (4.06 ± 0.95) may reflect the important role of supervisors and faculty members in helping postgraduate students identify research gaps, refine research questions, assess feasibility, and select appropriate methodologies. Thus, academic guidance may provide students with the expertise and direction required to make appropriate research topic decisions.8

The lowest mean score was observed for personal considerations (3.84 ± 0.91). However, the score remains above the midpoint, indicating that personal interest and prior knowledge were still relevant to topic selection. The relatively lower ranking may be because postgraduate students have to balance their personal preferences with practical feasibility, ethical requirements, academic relevance, publication opportunities, and future career prospects. This finding differs from Yusuf et al, who identified that the topic falling within the student's interest and intellectual ability was among the most frequent personal factors influencing research topic choice.9

Overall, the findings suggest that postgraduate dental students selected research topics by balancing current relevance and future potential with feasibility, ethical acceptability, and academic guidance, rather than relying primarily on personal considerations. This overall pattern is consistent with Elhamy and Abdulmajeed, who found that both internal/subjective and external/objective factors influence research-problem selection, with scientific and institutional considerations also affecting the selection or modification of research problems.10

The study has several strengths. It included postgraduate students from different academic departments, providing a broader representation of the study population. A structured and validated questionnaire covering multiple relevant domains was used. The findings are also broadly in agreement with Dornala et al., who proposed criteria for selecting research topics that include being time-bound, pragmatic, innovative, interesting, contemporarily relevant, and ethically acceptable through consent.11

The study has certain limitations. The use of convenience sampling may have introduced selection bias and may limit the generalizability of the findings. As the study was based on a self-reported questionnaire, responses may have been influenced by recall and social desirability bias.

Future studies should include larger and more diverse populations from different disciplines and regions. Longitudinal studies may provide better understanding of changing research preferences over time. Institutions should also encourage mentorship programs and research guidance workshops to support effective research topic selection.

IV. CONCLUSION

The present study concludes that research topic selection among postgraduate dental students is mainly influenced by relevance and future potential, feasibility constraints, ethical considerations, and academic guidance.

Participants preferred topics that were practical, ethically feasible, publication-oriented, and

beneficial for future academic and professional growth.

Overall, the findings highlight the importance of balancing personal interest with practical and academic considerations while selecting research topics.

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