

Original Article

Research Attitudes and Performance among Medical Faculty in Punjab: A Cross-Sectional Study

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Abstract

Objective: This study examined the relationship between research attitudes and research performance among faculty members in medical universities in Punjab, Pakistan. Specifically, it assessed faculty attitudes toward research, measured research performance, and examined the association between the two.

Methods: A quantitative causal-comparative (ex post facto) research design was employed. The study population consisted of 1,434 faculty members working in medical universities in Punjab. A sample of 425 faculty members was selected through random sampling. Data were collected using a validated questionnaire based on a five-point Likert scale. A total of 321 responses were received, and after data cleaning, 313 valid responses were analysed. Reliability was established through Cronbach's alpha, and data were analysed using descriptive and inferential statistics in SPSS.

Results: Faculty members demonstrated highly positive research attitudes (Mean = 4.3, SD = 0.3), whereas research performance was comparatively moderate (Mean = 3.4, SD = 0.7). No significant differences in research attitudes or research performance were observed across gender, qualification, or institutional categories. Teaching experience significantly influenced research performance ($p < 0.001$), with senior faculty members exhibiting higher productivity than junior faculty members. Significant disciplinary differences were also observed in research performance. A positive and statistically significant relationship was found between research attitudes and research performance ($r = 0.199$, $p < 0.001$).

Conclusion: Faculty members in medical universities in Punjab possess highly positive attitudes toward research; however, these attitudes are not fully reflected in research productivity. Institutional barriers, workload pressures, limited funding opportunities, and unequal access to research support appear to constrain research performance. Strengthening institutional facilitation, research capacity-building initiatives, mentorship opportunities, and supportive academic environments may help translate positive research attitudes into sustained research productivity and academic excellence.

Keywords: Attitude; Faculty; Medical Education; Research Personnel; Research.

Introduction

Research attitude and performance are critical factors of academic excellence in medical universities. Favourable faculty attitudes are a significant factor in whether faculty members engage in research activities, collaboration, and professional development. Positive attitudes promote innovation, critical thinking, and active participation in research practices in universities.¹ Research attitude is the tendency of a person to think, feel, and conduct research. It reflects beliefs, feelings, motivation, and dispositions toward research-related activities. A positive research attitude is more likely to contribute to research productivity and institutional research objectives.² Faculty attitudes are an important aspect of medical education and contribute to teaching, learning, and research culture. Participation in scholarly activities and academic innovation is positively associated with intrinsic motivation, professional commitment, and institutional support, whereas workload, burnout, and inadequate training negatively affect research involvement and productivity.³ The growing use of digital technologies, artificial intelligence, and telemedicine has influenced faculty attitudes toward research and

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Data Availability Statement: The article abstract is based on the PhD thesis of the first author, who is enrolled in the Department of Information Management, Minhaj University Lahore. All data are available and can be provided upon request. No AI was used in any section of this study.

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professional practice. Positive perceptions of digital tools enhance information access, communication, and evidence-based decision-making in medical education and healthcare research.^{4,5} Libraries and information literacy programs also play an important role in research engagement and scholarly productivity. Effective use of library resources and digital information systems is associated with improved research involvement and academic outcomes, although limited institutional resources and information literacy skills remain barriers to research participation.⁶ Research performance refers to measurable scholarly outputs such as publications, conference presentations, grants, citations, and supervision of research students.⁷ Institutional support, leadership, technological advancement, interdisciplinary collaboration, and professional development significantly influence research productivity and faculty growth.^{8,9} Case-based learning, digital healthcare technologies, reflective practice, and clinical decision-making skills contribute to improved analytical abilities, collaboration, professional competence, and academic outcomes. Overall, positive research attitudes are important drivers of faculty engagement, motivation, and scholarly productivity.

The objective of the study was to examine the attitudes towards research productivity among faculty members in medical universities in Punjab and to measure the research performance of faculty members using the criteria of HEC-recognized journals, impact factor journals, and conference proceedings.

Previous studies have investigated research attitude or research performance separately, but few have examined the relationship between these two within medical universities' faculty in Punjab, Pakistan. Most previous work has been directed towards the effectiveness of teaching, technology, or student outcomes, and there has been a lack of attention to the attitudes of faculty and their impact on research productivity in medical education. In addition, aspects such as workload, research funding, information literacy, and technological support have not been well discussed in the local context. Furthermore, there is a gap in the extensive research that can be done on how digital tools, artificial intelligence, and professional support systems can improve the research performance of medical university faculty members in Pakistan.

Methodology

A quantitative and causal-comparative (ex post facto) study design was used. A questionnaire was developed with a 5-point Likert scale and was validated by experts for content validity and Cronbach's alpha for reliability. All eight medical universities in the province of Punjab were included in the study and were both recognised by the Higher Education Commission (HEC) and the Pakistan Medical & Dental Council (PMDC). The study population comprised all 1,434 faculty members: professors, associate professors, and assistant professors. Random sampling was conducted, and a sample of 425 respondents was selected. Data were collected from October 2025 to January 2026; after cleaning the data, 313 responses were analysed. According to Ramanathan et al. sample size calculation details are available via the WHO sample size calculator: confidence level:95%, anticipated population proportion:52.1%, absolute precision required:5. The questionnaire was distributed online via Google Forms. Data were analysed using descriptive and inferential statistics, with the Statistical Package for the Social Sciences (SPSS) programme, version 26.0.

This study was limited to medical universities in Punjab, Pakistan. It pays attention to faculty members at the professor, associate professor, and assistant professor ranks in particular. This study does not involve demonstrators, lecturers, administrative staff, or outside researchers.

Results

The total population of the study was 1,434, and the calculated sample size was 425. A total of 321 responses were received. After data cleansing, 313 valid responses were retained for analysis, representing an effective response rate of approximately 74%. The mean scores of the different variables show lower scores on Research Performance (3.4) than on Research Attitudes (4.3), which means that positive research attitudes are not translated into real research productivity. This gap reflects that despite positive attitudes and perceived competencies, there are barriers impacting implementation. A moderate performance score indicates that institutional and systemic constraints are significant factors limiting performance. The low standard deviation of attitude (0.3) means that the faculty attitudes are relatively uniform and positive, while the high standard deviation of performance (0.7) means that there is unequal research output, which reflects differences in access to resources and support. The overall results also indicate that research performance is more reliant on the institutional climate and facilitation than on an individual willingness only, and that systemic improvements are needed.

Table 1: Analysis of Overall Total Score

S.NO	Objective	Mean	Std. Dev
11	Research Attitudes	4.3	0.3
2	Research Performance	3.4	0.7

Attitude Comparisons

There was no gender difference in research attitudes ($p=0.323$). The mean scores for male and female faculty were 4.3, respectively, suggesting that the perceptions, opportunities, and research barriers were similar. The results indicate that policies for research enhancement must be oriented toward institutional factors, and not towards gender. No significant differences were found between qualifications for research attitudes ($p=0.411$). Attitude scores for PhD faculty (4.4) were slightly higher than for other qualification groups (4.3), with competencies being almost the same. All faculty groups need equal research support and development opportunities, the results show. No significant difference was found between teaching experiences and attitudes towards research ($p=0.733$). There was no significant difference between junior and senior faculty positive attitudes, with scores of 4.28 and 4.33, respectively, indicating that positive attitude towards research is established early and persists through the faculty's academic journey. Institutional barriers do not seem to be unique to any level of experience. The attitudes towards research of government and private university faculty were found to be the same (4.3), and there was no significant difference between the two ($p=0.966$). While competencies were slightly higher at private universities, the same restrictions were affecting research at both. Competencies, performance, impact, and challenges were significantly different between disciplines ($p<0.001$). The research capacity of the Basic Medical Sciences and Allied Health Sciences faculty was relatively strong, but for medical allied faculty it was low, and barriers were high. This result highlights the need for a faculty research capacity-building program.

Table 2: Attitude Comparison

Variable	Category	Mean	Std. Dev	Confidence Interval (CI)	p-value
Gender	Male	4.3	0.3	0.037 - 0.110	0.323*
	Female	4.3	0.3		
Qualifications	MD/MS/FCPS/MPhil/PhD	4.3	0.3	0.079 - 0.187	0.411*
Year Experience	0-5	4.28	0.40	0.090 - 0.188	0.733*
	16 above	4.33	0.33		
University Based	Government	4.3	0.3	0.112 - 0.117	0.966*
	Private	4.3	0.2		
Faculty- Based	Various disciplines	4.3	-	-	0.447*

*Independent Sample t-test, $P<0.05$ as level of significance & *ANOVA, $p<0.05$ as level of significance

There was no significant difference between males and females in terms of research performance ($p=0.947$). The mean score for male and female faculty was the same (3.4), showing no gender-specific difference in terms of research involvement and productivity. Thus, it is important to develop research improvement strategies based on institutional rather than gender-specific considerations. There was no significant difference in research performance for qualification groups ($p=0.741$). The performance was slightly better among M.Phil. holders (3.5), MD/MS faculty (3.4), and PhD faculty (3.4), whereas for the FCPS holders, the score was 3.3. The results indicate that advanced research degrees alone may not be the strongest indicators of research productivity, as clinical qualifications and institutional support may play a larger role than research degrees in productivity. Research performance was significantly affected by teaching experience ($p<0.001$). The research performance scale scores ranged steadily from 2.87 for faculty with 0–5 years of experience to 3.65 for faculty with 16+ years of experience. This trend is indicative of the positive effect of professional networks, publication opportunities, research practice, and supervisory experience on productivity. For research performance, no significant difference was found between government and private universities ($p=0.724$), as both had the same mean score of 3.4.

The private university faculty had slightly higher ratings for their competencies, but workload and lack of funding made it difficult to increase research productivity.

There were significant differences between the disciplines in research performance ($p < 0.001$). The performance of the Surgical Allied and Allied Health Sciences faculty was the highest (3.6), and the Medical Allied faculty reported the lowest (3.1). These differences are indicators of the need for faculty-specific interventions and specific research capacity-building programmes, especially for Medical Allied faculty.

Table 3: Performance Comparisons

Variable	Category	Mean	Std. Dev	Confidence Interval (CI)	p-value
Gender	Male	3.4	0.7	0.154 - 0.165	0.947*
	Female	3.4	0.8		
Qualifications	MD/MS/FCPS/MPhil/PhD	3.4	0.7	0.286 – 0.219	0.741*
Year Experience	0-5	2.87	1.07	0.511 - 1.049	($p < 0.001$)*
University Based	16 above	3.65	0.46	0.204 – 0.294	0.724*
	Government	3.4	0.7		
Faculty- Based	Private	3.4	0.5	-	(p<0.001)*
	Various disciplines	3.4	-		

*Independent Sample t-test, $p < 0.05$ as level of significance & *ANOVA, $p < 0.05$ as level of significance

Table 4: Comparison of Research Attitudes and Research Performance

Objective		Attitudes	Performance
Research Attitudes	Pearson Correlation	1	.199**
	Sig. (2-tailed)		<.001
	N	313	313
Research Performance	Pearson Correlation	.199**	1
	Sig. (2-tailed)	.000	
	N	313	313

** . Correlation is significant at the 0.01 level (2-tailed).

Discussion

The results of the present study show that the faculty members of Medical universities in Punjab have a highly positive attitude towards research, with a high mean score of research attitude ($M = 4.3$). These findings corroborate the attitude-behaviour assumptions proposed,¹⁰ which highlighted that positive attitudes increase motivation, commitment, and involvement in professional activities.¹¹ This is consistent with the study conducted, which concluded that positive perceptions towards research enhance scholarly participation and academic involvement.^{12,13} No significant gender, qualification, and institutional differences were found in the research attitudes, indicating that positive perceptions towards research are shared by all the faculty members. These results suggest that demographic factors are not limiting factors in motivation to research, but rather that it is influenced by the wider academic and institutional contexts.^{14,15} This is in line with the support found by those who saw how mentorship and professional exposure fostered research interest and scholarly involvement, more so than personal background characteristics.^{16,17} Research attitudes were generally very positive, but the level of performance in research was comparatively moderate ($M = 3.4$), which means there was a gap between positive attitudes and research productivity. This result illustrates that having positive attitudes is not enough to assure high research output when institutional barriers exist. Earlier research also found the negative impact of workload, burnout, and lack of research facilities on faculty productivity and research engagement.^{18,19} The highly significant difference in research performance among the different categories of teaching experience is an indicator of the positive impact of professional exposure, academic networking, and supervisory practice on research performance. The research performance of the senior faculty members seemed to be better compared to the junior ones, and this is in line with the observation that research productivity is indicated by experience, publications, and collaborative activities.^{20,21} Similarly, highlighted the importance of institutional support and professional development opportunities for faculty to improve research outcomes.²²

Conclusions

The results of the study indicate that the attitude of the faculty members in the medical universities of Punjab is highly positive towards research, but their research performance is comparatively moderate. The high mean score for research attitude illustrates the high level of motivation, commitment to work, and willingness of the faculty to do research, which is indicated by the theoretical assumption of the attitude–behaviour relationship that positive attitudes are not enough to guarantee higher academic productivity. Effective research outcomes seem to be limited by institutional barriers, workload, limited funding, and unequal access to opportunities for research. In addition, experience in teaching correlated well with research performance, indicating that professional exposure and academic networking are helpful for enhancing academic performance. In general, the study confirms the role of institutional facilitation, research support systems, and capacity development in converting positive faculty attitudes into sustainable research performance.

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Contributions:

AS - Conception, Design

AS - Acquisition, Analysis, Interpretation

AS - Drafting

RS MNG MT MU - Critical Review

All authors approved the final version to be published & agreed to be accountable for all aspects of the work.

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