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Editorial
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The Hidden Cost of Knowledge: Financial Barriers Facing MPhil and PhD Scholars in Pakistan

ABSTRACT:

Objective: This study highlights the systemic challenges faced by MPhil and PhD students in basic and translational sciences in Pakistan, emphasizing the critical need for tuition waivers and scholarships.

Methods: A narrative review of institutional policies, national funding structures, and international benchmarks was conducted to assess the state of postgraduate financial support.

Results: Many public-sector universities in Pakistan require postgraduate students to pay substantial tuition fees and fund their own research supplies. The lack of structured financial support has led to high attrition rates, delayed program completion, and underutilization of national talent. Comparisons with global models indicate Pakistan lags significantly in supporting its future researchers.

Conclusion: To realize its ambition of becoming a research-driven nation, Pakistan must urgently reform its approach to postgraduate education by providing financial support through sustainable, transparent, and merit-based funding mechanisms.

KEYWORDS: *HEC, MPhil, PhD, Pakistan, Student Scholarships*

INTRODUCTION:

Postgraduate education in basic and translational sciences plays a foundational role in shaping a nation's intellectual, economic, and technological future. MPhil and PhD students are the frontline researchers who contribute directly to the generation of new knowledge, innovation in healthcare and diagnostics, advancements in life sciences, and the implementation of evidence-based public policy. These scholars not only drive institutional research projects but also mentor undergraduate students, collaborate across disciplines, and support faculty in grant-funded initiatives making them indispensable to any research ecosystem.

In Pakistan, however, the potential of this critical academic segment remains severely underutilized due to systemic financial barriers. Unlike many countries that treat postgraduate education as a strategic investment, public-sector universities in Pakistan often have high tuition fees on MPhil and PhD students. More troublingly, students are frequently required to fund their own research supplies, laboratory reagents, fieldwork costs, and even data analysis tools; expenses that, in most well-supported academic environments, are covered by institutional or grant-based funding. (Qureshi & Khawaja, 2021)

This model of "self-financed science" is fundamentally misaligned with Pakistan's stated ambition to strengthen its research capacity and global academic standing. It deters capable and motivated students particularly those from low-income and underserved regions from pursuing advanced degrees. The impact is twofold: a narrowing of the national talent pipeline and a dilution of the quality and volume of scientific output.

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To make matters worse, the issue is compounded by the restriction of access to postgraduate opportunities based on domicile status. Students who demonstrate merit may be excluded from admission or funding in institutions outside their home province due to provincial policies, not academic criteria. This practice limits academic mobility, fuels inequity, and prevents the country from building a truly national research workforce.

If Pakistan is to meaningfully enhance its knowledge economy and move toward a research-driven model of development, it must begin by enabling its postgraduate students not financially burdening or excluding them. Addressing these barriers is not only an educational imperative but a national one.

METHODS:

This paper is grounded in a narrative review approach aimed at critically examining the financial and structural landscape of postgraduate education in Pakistan, with a focus on MPhil and PhD programs in basic and translational sciences. A narrative review was chosen to allow for a broad synthesis of policy documents, institutional reports, and scholarly literature, particularly where quantitative data may be limited or inconsistent.

Primary data sources included:

- Publicly available policy documents from the Higher Education Commission (HEC) of Pakistan, including funding programs such as National Research Program for the Universities (NRPU), indigenous scholarships, and university faculty development initiatives.
- Institutional policies from selected public-sector universities in major provinces, focusing on tuition structures, research supply requirements, and fellowship availability.
- Academic publications that evaluate trends, inequities, and challenges in postgraduate education and research support in Pakistan. (Qureshi & Khawaja, 2021)

In addition to the national context, a comparative analysis was conducted using models from India, China, and Iran—three countries with comparable socio-economic trajectories but significantly more structured and integrated systems for supporting postgraduate researchers. This cross-national benchmarking aimed to identify successful funding strategies, policy instruments, and governance models that could inform reforms in Pakistan.

The review also incorporated secondary insights from reports by international development organizations such as the World Bank and UNESCO, particularly those assessing higher education investment in low- and middle-income countries. (World Bank, 2020).

This methodology allowed for the identification of key themes and systemic gaps, while offering policy-relevant recommendations grounded in regional feasibility and global best practices.

RESULTS:

The review of current postgraduate education practices in Pakistan reveals five critical structural challenges that limit equitable access and hinder research advancement:

Tuition and Fee Burdens Despite Research Contributions:

Postgraduate students in MPhil and PhD programs at public-sector universities are frequently required to pay high tuition fees even while serving as key contributors to institutional research output. This model of charging the very individuals who are actively generating knowledge undermines the foundational principle of investment in research capital. In many universities, there is no differentiation in tuition policies between coursework and full-time research phases, further amplifying financial strain during the thesis period when students are least able to work externally.

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Out-of-Pocket Research Expenses:

Beyond tuition, many students must independently finance critical research-related expenses, including laboratory reagents, software licenses, equipment rental, and fieldwork logistics. For students pursuing molecular biology, biomedical, or epidemiological research, these costs can reach unaffordable levels. The absence of centralized supply chains or institutional research budgets dedicated to student-led projects creates major inequities in what types of research can feasibly be undertaken, disfavoring experimental or field-based work.

Lack of Structured and Merit-Based Scholarship Programs:

While HEC and select universities offer scholarships, these are typically limited in number, not uniformly available across disciplines, and heavily skewed toward faculty development rather than student support. There is no national system of need- or merit-based funding for MPhil and PhD students in the basic sciences, which are often viewed as less commercially attractive than clinical or engineering disciplines. As a result, students in fundamental research areas face greater financial precarity.

Consequences for Student Progress and Research Output

These financial pressures directly correlate with high attrition rates, delayed thesis submission, and reduced research productivity. Many students take on part-time work, which detracts from the rigor and continuity of their research. Additionally, those who do complete their degrees often publish less, have fewer international collaborations, and are underprepared to pursue postdoctoral training due to the slow and fragmented research experience.

Global Comparison Highlights Competitive Disadvantage

In countries like China, India, and Iran, postgraduate students are commonly exempt from tuition and provided monthly stipends, subsidized housing, and fully funded access to laboratories. Structured teaching or research assistantships are embedded within PhD programs to create a clear academic pathway and financial sustainability. These models reflect a strategic national investment in building a robust scientific workforce, an area where Pakistan significantly lags. (Government of India, 2021), (China Scholarship Council, 2022)

DISCUSSION:

The current model of postgraduate education funding in Pakistan is incompatible with national aspirations for scientific advancement. If research productivity is to be enhanced, then the academic and financial sustainability of the individuals driving that research must be prioritized. Tuition waivers, research stipends, and guaranteed access to supplies should be institutionalized.

HEC must lead this reform by establishing clear funding pathways, incentivizing research mentorship, and collaborating with provincial and international partners. Universities must also be empowered to reinvest institutional research earnings into postgraduate student support.

Until these structural inequities are addressed, Pakistan risks continuing to underutilize its intellectual capital and falling further behind in regional and global research rankings. An additional barrier that exacerbates inequities is the restriction of access to postgraduate education based on domicile quotas. In many provinces, students are excluded from admission or funding opportunities solely due to their provincial or regional identity, rather than merit or academic potential. This domicile-based discrimination undermines national cohesion, dilutes the talent pool, and limits the cross-regional mobility of future researchers. A unified, merit-based policy framework is necessary to ensure that

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all Pakistani students regardless of geographic origin have equal access to advanced education and research opportunities. (World Bank, 2020)

CONCLUSION:

Postgraduate students are the lifeblood of any thriving research ecosystem. They contribute to groundbreaking discoveries, support academic mentorship, and help institutions achieve national and international research goals. Yet in Pakistan, this essential segment of the academic community continues to be burdened by an outdated and inequitable funding structure. The requirement to pay high tuition fees and fund research expenses out of pocket is not only counterintuitive but it is actively undermining the country's stated commitment to becoming a research-driven economy.

These structural inequities disproportionately affect students from low-income, rural, or marginalized backgrounds, thereby shrinking the national talent pool and reinforcing systemic barriers to innovation. Moreover, the reliance on domicile-based quotas for access to postgraduate seats and scholarships fragments academic opportunity and contradicts the principles of meritocracy, equity, and national integration.

If Pakistan is to move beyond aspirational policy statements and genuinely strengthen its scientific and research capabilities, then bold, coordinated action is needed. HEC, in collaboration with universities and provincial governments, must establish and enforce national policies that guarantee:

- Full tuition waivers for MPhil and PhD students in public-sector universities;
- Competitive, need- and merit-based scholarships and living stipends;
- Centralized funding for essential research supplies and thesis-related expenses;
- The removal of domicile-based restrictions in academic admissions and awards.

Such reforms are not expenditures in fact they are investments. Without them, Pakistan will continue to lose talented minds to financial exhaustion, international migration, or non-academic career paths. With them, it has a chance to build a vibrant, inclusive, and world-class research enterprise that meets the country's needs and contributes to global scientific progress.

Author's Note:

This manuscript is informed not only by a critical review of institutional policy and national education frameworks, but also by my own leadership experience as the former Dean of the School of Graduate Studies and as a senior academic administrator at Tier I universities in the United States. Currently serving as Chair of the Doctoral Admission Committee at Dow University of Health Sciences (DUHS), Pakistan, I have had the unique opportunity to observe and navigate the complexities of postgraduate education across two vastly different academic systems. These dual vantage points have shaped my understanding of the essential role that financial accessibility, institutional fairness, and transparent governance play in nurturing a productive and inclusive research culture. The insights and recommendations shared herein are grounded not only in data and precedent, but in personal engagement with the very systems we seek to improve.

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Sohail Rao , MD, MA, DPhil
HBond Foundation, 6819 Camp Bullis Road, San Antonio, Texas 78256, USA

Corresponding Author Email: srao@hbond.org

Disclosures: None

ORCID: **Sohail Rao**: https://orcid.org/0000-0001-5027-9992