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Striving for global excellence in research: challenges in world rankings for Pakistani medical Universities

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Received: 12 May 2024

Revised date: 26 May 2024

Accepted: 08 June 2024

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The Quacquarelli Symonds (QS) World University Rankings by Subject 2024 have once again highlighted the significant gap between Pakistani medical universities and their international counterparts. In this year's rankings, the University of Health Sciences (UHS), Lahore, stands as the sole representative from Punjab province alongside Sindh (Agha Khan Medical University, and Dow University of Health Sciences Karachi) to secure its position among the top 800 medical universities of the world.¹ As of last year, no medical university from Khyber Pakhtunkhwa, Baluchistan, or Gilgit Baltistan provinces is placed in this year's ranking. This disparity raises critical questions about the state of medical education in Pakistan and the strategies needed to elevate its institutions to global standards.

The QS rankings are a benchmark for academic excellence, considering factors such as academic reputation, employer reputation, research citations per paper, and the H-index. The impact of these rankings on medical universities is profound. High rankings enhance an institution's attractiveness to prospective students, faculty, and researchers. They also facilitate greater access to funding, foster international collaborations, and boost the university's overall reputation. For medical universities, which often rely heavily on research grants and international partnerships, a higher ranking can lead to more significant opportunities for groundbreaking research, better healthcare outcomes, and more comprehensive training programs for future medical professionals. The absence of most Pakistani medical universities from these rankings underscores a broader issue within the country's higher education system. Factors contributing to this include insufficient research output, lack of international collaboration, inadequate funding, and

limited focus on innovation and academic reputation. While UHS Lahore has managed to make a mark, it must now focus on strategies to further elevate its standing to the upper echelons where institutions like Oxford, Cambridge, Harvard, Johns Hopkins, and so on, reside.

University rankings like QS, Times Higher Education, Academic Ranking of World Universities, Shanghai Global Ranking of Academic Subjects,² and the Islamic World Science Citation Centre (ISC) play a pivotal role in shaping the reputation and credibility of institutions worldwide. The ISC, in particular, focuses on the scientific output of universities in the Islamic world, offering a comparative perspective for institutions like those in Pakistan.³ However, Pakistani medical universities have yet not made any significant position in this ranking system partly because of a lack of participation or awareness regarding successful application submission criteria.

Why most of the medical universities in Pakistan, especially from the public sector, are still struggling to achieve either their placements or a higher rank in these world-renowned ranking systems? To answer this question, several underlying issues must be addressed. First, research and development (R&D) in medical sciences require substantial investment, which is currently lacking especially within the public sector medical universities. Without significant funding, universities cannot support high-quality research projects or attract top-tier faculty. Second, there is a dire need to enhance the quality and quantity of research publications. Pakistani universities often lag in producing high-impact research papers, a crucial criterion for international rankings. Third, international collaboration and partnerships are limited, reducing the global visibility, and impact of Pakistani research.⁴

For Pakistani medical universities to ascent the global rankings, a multifaceted approach is necessary. Increasing investment in R&D is paramount. This involves both public and private sector funding, as well as establishing endowments and research grants specific to medical and health universities. Enhancing research output and quality through targeted incentives, training, and infrastructure development is equally important. The Higher Education Commission (HEC) of Pakistan should prioritize the allocation of funds specifically dedicated to medical universities, focusing on startup and competitive research grants which are essential for advancing healthcare in Pakistan. Additionally, the HEC should actively encourage and facilitate clinical trials by establishing Clinical Trials Units within medical universities. These units would not only enhance research capabilities but also ensure the rigorous testing of new treatments and interventions. Furthermore, establishing business incubation centers in medical universities can drive entrepreneurship, translating research discoveries into practical healthcare solutions and commercial ventures. This holistic approach would significantly elevate the quality and impact of medical education and research in Pakistan as HEC still remains the largest local funding body for most of the universities.⁵ Encouraging international collaborations can significantly boost the global presence and citation impact of research from Pakistani institutions. Furthermore, improving the overall academic environment by attracting and retaining high-caliber faculty, modernizing curricula, and fostering a culture of alumni exchange and engagement will contribute to better rankings.

The UHS Lahore, in particular, has the potential to ascend from its current position within the top 800 to the top 200 medical universities worldwide. To achieve this, UHS must prioritize strategic initiatives that align with global ranking criteria. This includes expanding its research capabilities and fostering international partnerships through a robust network of high-impact universities across the world.

1. First, UHS Lahore should invest in cutting-edge research facilities and encourage interdisciplinary research that addresses global and regional health challenges.
2. Apart from enhancing research output and quality, the university should prioritize faculty development by recruiting renowned scholars and providing continuous professional development opportunities to its faculty members as their expertise and reputation directly impacts the university's standing.
3. Third, fostering international collaborations and partnerships with leading medical institutions within Asia, Gulf, Europe, America, and so on, which can facilitate the exchange of knowledge and joint research initiatives with mutual exchange of both students and faculty.

4. In addition, investing in state-of-the-art research facilities, increasing the funds to publish research papers in high-impact journals, and active participation of students and faculty in international medical conferences can significantly improve UHS's global standing.
5. Moreover, establishing strong industry linkages can enhance the employability of graduates, further boosting the university's reputation.
6. Furthermore, focusing on improving its student services, including career counseling, mental health support, and extracurricular activities. A well-rounded student experience contributes to higher student satisfaction and better graduate outcomes, which are the major components of university rankings.
7. Implementing robust quality assurance mechanisms to continuously evaluate and enhance academic programs is also essential.
8. Engaging alumni and leveraging their networks for mentorship, funding, and collaboration opportunities can further strengthen the university's reputation and resources.
9. Finally, effective use of digital platforms and social media to highlight the university's achievements, research breakthroughs, and academic excellence can enhance its visibility and attract global attention.

In conclusion, the QS World University Rankings 2024 have highlighted both the challenges and opportunities for Pakistani medical universities. While UHS Lahore has managed to secure a position, there is a long journey ahead to reach the ranks of global leaders in medical education. By addressing fundamental issues related to funding, research output, international collaboration, and academic environment, Pakistani medical universities can aspire to achieve global excellence. The concerted effort of all stakeholders, including government, academia, industry, and international partners, is essential to elevate the status of medical education in Pakistan on the world stage.

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About the Principal Author

Prof. Ahsan Waheed Rathore [MBBS(KEMU), DCP(PU), MRCP(UK), MRCPCH(UK), FRCP(London)] is a renowned professor of pediatrics with an illustrious career as a scholar, academician, and

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In July 2022, Prof. Rathore was appointed Vice Chancellor of the University of Health Sciences Lahore. Under his leadership, the university has achieved remarkable advancements in academia, research, and administration, with the expeditious and successful implementation of significant innovative reforms.