

# Challenges in Rehabilitation Research in Pakistan

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Pakistan is ranked 5th in terms of population with 232 million people, while 338 million people are predicted by 2050<sup>1</sup>. As one of the country's major challenges, health care is managed on two levels: the provincial level and the federal level. Health care budgets are allocated 19.5 billion in fiscal year 2022-23, about 3% of the Gross Domestic Product (GDP), but less than the amount recommended by the World Health Organization (WHO)<sup>2</sup>.

As a key component of healthcare, physical rehabilitation includes habilitating children born with different abilities, restoring normal physical function after stroke, regaining normal physical function after musculoskeletal injuries, cardiorespiratory, sports, geriatric, speech, gynecological, and achieving physical independence through prosthetic and orthotic devices<sup>3</sup>. The benefits of regular physical activity and physical fitness are also associated with decreased chronic disease risk, preventing tenderness, promoting longevity and enhancing the quality of life<sup>4</sup>.

According to statistics, there were 27-34 million people with different abilities in Pakistan in 2014, while globally 15% of the total population had disability<sup>5</sup>. In terms of stroke prevalence per capita, Pakistan has the highest rate. The number of stroke cases reported in Pakistan each day is approximately 1000, resulting in 400 deaths daily, while the remaining 600 cases are managed through medical management and rehabilitation<sup>6</sup>. The prevalence of cerebral palsy in Pakistan is approximately double (i.e., 4 children per 1000) than globally (2-3 children per 1000).

In physical rehabilitation, research is vital to reporting key statistics about prevalence and incidence, identifying risk factors, adapting and developing diagnostic tools, testing for reliability and validity, and assessing whether existing treatment techniques are effective, as well as developing new protocols, guidelines, and treatment techniques.

Research mentorship and supervision are key challenges in rehabilitation research in Pakistan, even though the first rehabilitation institution was established in the 1950s<sup>7</sup>. Research in rehabilitation has expanded in the last two decades with the launch of MS/M.Phil and Ph.D. programs in universities. In various universities, faculty and MS/M.Phil and Ph.D. level students started doing research and publishing papers, but there was a lack in research mentorship/supervision. In the beginning, foreign faculty were engaged in some universities. However, today some supervisors with Ph.D. qualifications are available and supervise projects of Ph.D. level students.

Researchers in the rehabilitation sciences face another challenge when it comes to accessing literature. There are a majority of quality research journals that are not open access to students and institutions, and they require paid subscriptions. Since these journals charge subscription fees and publication charges, they restrict access to quality literature, publication of reports, and publication of research<sup>8</sup>.

Providing funding for research projects in rehabilitation sciences professions has always been a challenge. The total budget for the financial year 2022-23 was 9,000 billion PKR, and there was only 44 billion PKR allocated to higher education. In total, only 04% of the budget is allocated for higher education<sup>2</sup>. The higher education commission of Pakistan chartered 247 universities and degree-awarding institutions. There are approximately 58,000 university teachers and 2 million university students. HEC funds research projects through the National Research Program for Universities (NRPU), Technology Development Fund (TDF), Local Challenge Fund (LCF), Grand Challenge Fund (GCF), Rapid Technology Transfer Grant (RTTG), Technology Transfer Support Fund (TTSF), and Innovative and Collaborative Research Grant (ICRG)<sup>9</sup>.

Lack of latest equipment, research laboratories, and specialized research centers in the country especially in the universities and degree awarding or higher education affiliated institutions. There is a lack of the latest and modern diagnostic equipment, tools, and therapeutic equipment, as technology evolving very fast in the last two decades, and very sophisticated equipment is now been available in the portal form.

The way forward is to focus on research-related specialized faculty training and support to enroll faculty members in research-based MS/M. Phil and Ph.D. level degrees in physical rehabilitation, especially in top-ranked universities in technologically developed countries. HEC and universities must facilitate the faculty member, MS/M.Phil and Ph.D. level students for access to research databases and high-impact factor research journals. The state must increase the annual budget for higher education as per the recommendation of the WHO and plan to develop well-equipped research laboratories and research centers in the universities and affiliated teaching hospitals.

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