

Barriers in cultivating research culture at an institutional level: Narrative from a developing country

Faheem Khan, Ammara Naveed

Research is regarded as the backbone of any quality academic institute and is the growth hormone for faculty. Almost every institute and faculty member want the recognition, but few reach excellence. This is more so for developing countries, where research generally comes after service delivery and education. Pakistan has just four medical journals indexed in PubMed as compared to more than two dozen medical journals from its neighbouring country India.^{1,2} This explains the state-of-affairs about research in Pakistan. This paper will help in identifying the barriers that slows or stops the progress in inculcating research as the lifeline of academia, in Pakistan.

To identify barriers in generating good research and hurdles local journals face in achieving the indexed status, one has to examine it critically. The research becomes essential at three levels in Pakistan; as a dissertation required at the end of residency, for promotion in academic ladder and last is when the physician has interest. This last need ensures a continuous generation of high quality research. Unfortunately the first two requirements, produce research papers which fail to reach publication in high impact factor journals so are not able to serve as a catalyst for establishing a realm of research in the Institute. Research flows a different path in developed countries, with established research and ethics committees, dedicated research staff and institutional support. In developing countries like Pakistan, research is still in infancy and struggling for survival. The below six points will help to analyze this complicated issue with a non-political lens.

1. Funding:

Research suggests that clinicians find financial issues, family and career as constraints in doing research.³ Institutes investment policy is now more focused over return-on-investment (ROI). There is no harm in focusing over ROI but the issue arises when the main focus of the institute becomes money and not academic

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Pakistan Kidney and Liver Institute & Research Center, Lahore, Pakistan.

Correspondence: Faheem Khan. Email: khan.faheem@outlook.com

growth or scientific contribution to the community.

Lack of funding makes it difficult to hire professional research personnel, acquire good software, creating physical space, initiating seed money grants for young faculty, submitting journal subscriptions, sharing processing charges of journals, capacity building of faculty through training and supporting travel expense.

Funding remains the major barrier in research, and this is more pronounced for students and junior faculty members. A PhD thesis listed at Higher Education Research repository points out finances as one of the barriers to research.⁴ Extra mural funding heavily depends on the number of internal grants that one has received. Seed money grant is the most useful tool to address this, i.e. fund your own faculty and then expect an extramural grant. One solution to this could be cutting a small amount from faculty salary (with consent) and adding same amount by the institute. The amount pooled shall be supervised by an independent committee for the fair distribution to respective departments for conference participation, research grants and capacity building projects. This will serve two purposes, first faculty will have ownership in research related activities and second less financial burden on Institute.

2. Human resource:

Skilled human resource is one of the biggest challenge in research. Competent, professional and skilled research members in developing countries are still rare. A qualitative study conducted in Lahore also reveals that supportive and research oriented faculty helps in breeding the seed of future research.⁵ In many developing regions, a career in research is not considered rewarding and as the job market influences career choices thus the chances of receiving highly competent people remains bleak. Retaining good research faculty in academic institutions is also crucial as NGOs financially compensate at a much higher level than institutes. The turnover of research members is generally high. We believe that good salary packages and less stressful environment may help to retain more

members.

3. Time:

The daily hassle of clinical life, leaves faculty with barely any time to design and execute good research. This ends up in two situations, either they do basic retrospective research or asks for a guest authorship from peers. National Health Services (NHS) is planning to allocate dedicated research time for faculty. This will allow the faculty to avail time for understanding, planning, and later executing good researches. Some institutes mandate publications as one of the appraisal indicator. The protracted time shall be accounted in appraisal and this will ensure the faculty to achieve maximum from this allocated time. No policy is difficult to implement unless the institute knows the rationale of it and faculty is willing to participate.

4. Incentive:

The human psychology works on the principle of reward and punishment. The reward should be in a form that works for that person, for example: monetary benefit may attract some but not all. An institution in Pakistan has designed a system in which at the end of year they calculate incentive based on number of research papers published in peer-reviewed journals. The higher the impact factor, higher will be the incentive. This creates an external motivation among colleagues to have more publications. However in quest of receiving more incentives, there is a threat that quality may decrease, this should be necessarily kept in focus, while designing the policies.

The second incentive could be promotion based on published research papers. An institute in Pakistan has devised the three major tracks for the faculty; clinician, educationist and researcher track for the faculty to choose. One can also have a mixture of these. This will then determine how much work that faculty has done in his designated area and will also lift the pressure from those clinicians for whom research may not be a focus. Over time such a strategy will result in dedicated staff for research and this will flourish the research culture further.

5. Capacity building:

In our region, training programmes are designed more towards clinical service and education, rather than research, thus we end up with very skilled clinicians having poor research capacity. A Study from Pakistan highlight that both undergraduate and post graduate students experience inadequate research training

during their study.⁶ A study by Sabzwari et al identified that physicians involved in research during residency are more likely to continue conducting studies as faculty also.⁷ There is sufficient evidence around the globe to suggest that early training and involvement of undergraduate students in research helps in shaping research skills in post-graduate life.⁸ This highlights the pertinence of research training and involvement early in medical career. Inadequate mentorship is one of the leading factors that creates hurdles in pursuing research. Technology has made this relatively easy by offering online tutoring, video conferencing and software. Capacity building needs the support of the institute, in arranging space, allowing protracted time, incorporating research as a subject, providing funding and fostering inter-institutional partnerships.

6. Team work:

Research is never a solo flight, rather building a team with diverse background yet sharing a common interest. Team work means that the fraternity is open to discussing ideas, supporting projects, providing access to data, offering expertise, sharing the work, giving credit and building interest groups. Regional observations depict a different picture, with greed to have more papers as PI, medical coup over work of juniors, hiding and not giving permission to access scientific data and unable to share credit with the team. The lust to publish more, leads to good chances of promotion and less chances for producing quality research. Institutes can lessen this stress over faculty by identifying track system and accordingly promotion criterion. National organisations may also help in this by increasing the number of authors in recognition of scholarly work. Beside all these, individuals have to raise their ethical understanding and implement it in practice.

Research is a team work, and the institute works as the manager of the team, by arranging all the essentialities. Nevertheless the institutional culture is driven by a group of individuals and for this every member has to take the responsibility. In quest of overcoming barriers we always need to remember that barriers are difficult to cross until they are crossed!

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