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Haider A Naqvi
Aga Khan University

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Students' Research: Tradition Ahead of Its Time

Haider A. Naqvi

ABSTRACT

This view point describes the experience of introducing research at an undergraduate level during clinical rotation in psychiatry. Objective of this initiative was to encourage critical thinking, self directed learning and sensitization to mental health issues. This contributed to student learning besides galvanizing their interest in the subject. The opinion piece aims to expose various issues to students' research in the context of medical education in Pakistan.

Key words: *Students' research. Mentorship. Medical education. Problem based learning. Mental health.*

Universities are not places where knowledge is just transferred from the teacher to a student. Knowledge has to be generated at a University, through research and inquiry. Research is central to teaching. We teach what has been established through research - either by us or others. Local research, when carried out in the context of the global issues, ends up having more utility in terms of application. It is one thing to teach research, while quite another to carry-out one. In the domain of education, in research-methods boundaries are indefinite. Critical distinction between doing-research and 'teaching' research-methods is that research has to be an action. Teaching in research methods is insignificant until and unless it translates into an actual research inquiry. There is some evidence to suggest that students in Problem Based Learning (PBL) system are more receptive to research than traditional lecture-based system. However, this claim needs to be validated with a larger sample size and representative sampling frame.^{1,2}

Students do conduct research at an undergraduate as well as postgraduate level. An important question in medical education is when they should be exposed to research. There is some evidence to suggest that the earlier the students are exposed to research, better the outcome is.³ The desirable effect may be in terms of research initiatives and publications, academic pursuit in public health and actual evidence-based practice in clinical years. Learning to think divergently about an idea, to develop it systematically through discourse and execute a research plan is a composite skill, that needs to be mastered through practice. The conventional system in undergraduate education focuses on imparting knowledge from an experienced teacher to a receptive student. It however, does not promote critical

thinking or questioning existing paradigms of medicine. There are various issues related to students' research, which will be highlighted in this opinion piece.

The department took an initiative in which students were guided to do a research project on issues concerning mental health. This was during their 4th year undergraduate clerkship rotation in psychiatry. The objectives of this initiative were to imbibe critical thinking, self directed learning and sensitization to mental health issues. Students were encouraged to choose from the broad theme of topics, under the guidance of a supervisor who acted as their facilitator.

Team of seven medical students took the responsibility of designing and conducting the research project, on successive rotations through psychiatry. They were expected to present the findings of their research project at the end of every rotation. An important outcome of this pilot project was that students carried out research inquiries on culturally pertinent issues and addressed problems unique to the context of health care scenario in Pakistan. This contributed to their learning in psychiatry besides galvanizing their interest in the subject. It also promoted critical thinking and evidence-based learning, which is a critical pre-requisite to any under-graduate teaching.

Research publication by students could be divided in following four broad groups of; psychiatric epidemiology, Knowledge, Attitude and Practice (KAP) studies, opinion surveys and health service audits. While few have been published, others are under peer-review process of evaluation.

Generally, courses pertaining to research methods are distributed over the course of five years of medical curriculum of the Medical Colleges in Pakistan. Elective research rotations are expected to provide the opportunity to pursue research during the medical education. These are generally graded in terms of performance outcome. The real challenge, in terms of teaching, is to inculcate research mindedness among the students. This may require ongoing research pursuits. Some quarters have expressed their reservation regarding

Department of Psychiatry, The Aga Khan University, Karachi.

Correspondence: *Dr. Haider A. Naqvi, D-215/1, KDA Scheme No. 1-A, Stadium Road, Karachi.*

E-mail: haider.naqvi@aku.edu

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students doing research outside their elective time. Declining grades are often cited as a reason behind a student's underperformance. Some students are also unable to keep a balance between their scheduled activities and social hours. Imperatively students have other distractions – competing social and relationship commitments – which could also lead to declining performance. A long standing, trusted mentor-mentee relationship can help them reel out of such tail spins. Research supervisor can provide such an avenue for professional growth and development. However, not every interaction is based on integrity; students can, and do end up data-mining for faculty.

Student research projects are mostly time bound and subjected to the dynamics of rotations in medical school curricula. Ethical review of such projects is one of the major issues. In places where there are ethics review committees (ERC)/ethics review boards (ERB), approval of such projects is of paramount importance; however, committees meet periodically, application and review process is also very tedious and time consuming, making it difficult to do research under the umbrella of ethics. In such circumstances, review process needs to be fast-tracked for students' research projects. In places where there are no ERC's it is judicious to discuss the ethical issues pertaining to human subject research with the students, in order to make the study compliant with ethical standards outlined in the Helsinki Declaration on Human Subject Research.⁴

When research is relegated to postgraduate medical education alone then students do research just for the sake of it. They see it as a requirement which needs to be fulfilled for a degree. Research is considered an impediment between successful completion of a fellowship and bounties of rich private practice. Needless to say, such clinicians, lacking sound understanding of evidence-based practice, do not necessarily do well in the domain of practice.

Mentorship is also an important issue during the post-graduate training years. The slipshod approach by supervisors, when research is relegated as a mere formality, does not impart enthusiasm to trainees. One

way in which students' research can be improved is by having a mandatory thesis committee. Committee could have a mix of field experts (supervisor) and other area specialists relevant to the topic of inquiry. One of the benefit of having a mandatory thesis committee is that various facet of research and medical-writing can be addressed more formally. This could also provide students with an opportunity to interact and learn from people with various backgrounds, thereby building research capacity. In the context of Pakistan, a developing country with dearth of resources, research is too important to be taken dismissively.

A teacher can only teach the 'how-to-do-it' part of research, the spirit of inquiry can only be inculcated through mentorship. In teaching, supervisors works closely with a trainees, giving him critical feedback on thought-process apart from challenging mental blocks and limitations. In the words of illumed Khalil Gibran (1883-1931) "The teacher who is indeed wise does not bid you to enter the house of his wisdom but rather leads you to the threshold of your mind for the vision of one man lends not its wings to another".⁵ Through such wisdom a teacher encourages pupil to start a journey of his own inquiry – a lifelong pursuit of search and research.

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