

Original Article

Awareness of Medical Students about research: Current Practices and FutureMuhammad Asif Naveed¹, Zahid Latif², Shabbir Hussain³

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ABSTRACT

Introduction: The struggle towards evidence-based medicine can only be achieved if all the healthcare workers are ready to contribute to research and for best practices. One of the most critical components of learning is the seeking of knowledge through research. There is a need of the hour that our youngsters into medical fields participate enthusiastically towards research to collect data of their population so that their specific health problems could be addressed appropriately. There is a general perception that research culture in undergraduate MBBS students is lacking.

Objective : This study focused on studying the awareness of our young undergraduate medical students towards research.

Methods: A After obtaining informed consent from the undergraduate medical students, a pre-designed and pre-validated questionnaire was provided to them. The sampling technique used was non-purposive random sampling. There was a total of 27 questions of which the first 19 were related to awareness of medical students towards research while 8 questions were related to barriers in conducting research. The validity of the questionnaire was checked, and a few questions were modified accordingly, Chronbach Alpha was applied. All those participants were excluded from the study who were found to have left 5 questions unanswered.

Results: Overall less than 40% of the students are aware of the basics of the research and less than 5% have participated in the research-related activity. The majority of the students are motivated for doing research. More than 50% of students think that lack of training, lack of guidance by faculty, lack of institutional support, and lack of funding are important barriers in doing research.

Conclusion: Our study concluded that most of the students are not involved in research but these students are aware of the importance of research in the medical profession.

KEYWORDS: Awareness, Medical Students, Research

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INTRODUCTION

Research is defined as a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge. Research relating to the health and medical field has contributed a lot in improving community health, prevention of disease, and reducing morbidity and mortality. The research from the beginning of the human race has contributed in the form of a better quality of life and increasing life expectancy (Nass, Levit, & Gostin, 2009).

The struggle towards evidence-based medicine can only be achieved if all the healthcare workers are ready to contribute to research and for best practices. One of the most critical components of learning is the seeking of knowledge through research. Research is the central pillar of inventing new things and providing ease to ailing humanity. There is a growing need that research should be made a vital component of primary care and general practice (Jowett, Macleod, Wilson, & Hobbs, 2000).

Our young health care providers need to appreciate the value of research in their everyday practice and make healthcare efficient and cost-effective (Gupta, Malhotra, & Malhotra, 2018). Research plays an important role in the priority setting of a society and system towards its burning issues, policymaking, and creating awareness amongst the masses (Soe et al., 2018). On an individual's level, critical thinking, obtaining multiple skills, widening of horizons, and capacity building are also greatly enhanced as a result of their involvement in research. (Sabzwari, Kauser, & Khuwaja, 2009) Health problems of every continent and country are different from other countries so there is a need to develop its own research-oriented evidence-based medicine system (Sabzwari et al., 2009).

There is a need of the hour that our youngsters into medical fields participate enthusiastically towards research to collect data of their population so that their specific health problems could be addressed appropriately (Fatima, Zehra, Ahmad, & Obaid, 2014). A review of the literature showed that the data regarding knowledge, attitudes, and practices toward medical research among postgraduate students pursuing undergraduate medical studies in Pakistan and other southeast Asian countries are lacking (Ichsan et al., 2018; Memarpour, Fard, & Ghasemi, 2015). Research here like most developing countries is in its infancy (Cursiefen & Altunbas, 1998).

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Research and its attitude are a culture that needs to be incorporated into our students. The quality of current research is questioned for the last two decades. The lack of a culture of research may be related to our methodology of teaching students that are not making them good researchers (Rehan, 2003). This study focused on the awareness of our young undergraduate medical students towards research. This will help to generate an assessment regarding the prospects of research in the medical field in this part of the world and the factors that need to be addressed for quality research to take place.

METHODS

After obtaining informed consent from the undergraduate medical students, a pre-designed and pre-validated questionnaire was provided to them. The study questionnaire was reviewed and approved by the Research Committee/Ethical review board. We enrolled 206 medical students of Allama Iqbal Medical College, Lahore. The sampling technique used was non-purposive random sampling. There was a total of 27 questions of which the first 19 were related to awareness of medical students towards research while 8 questions were related to barriers in conducting research. These questions were close-ended with a yes/no option. We checked the validity of the questionnaire, and a few questions were modified accordingly, Cronbach Alpha was applied. All participants were provided sufficient time to fill the questionnaire. The study objectives and other details were explained to the students at the time of giving the questionnaires. All those participants were excluded from the study who were found to have left 5 questions unanswered. The data were expressed in percentage and analyzed by SPSS version 23.

RESULTS

A total of 206 medical students participated in the study. Questionnaires of 06 students were incomplete so they were excluded from the study. Female students consisted of 71% of total participants while male students were 29%. A total of 37% of students were familiar with research types while 67% said that they are not aware of the research type. Familiarity with research protocols was found in only 22.5% of the students while 77.5% responded that they are not familiar with research protocols. Data interpretation software/tools familiarity was found in 11% of the patient while 89% of the participants were not familiar with these tools. A total of 85% of students were not aware of ethical committee approval. Only 2.5% of students have conducted any research while no student presented any paper in the conference and 02% of students have published one or more articles. 87.5% of students do not read the medical journal regularly. No student attended a research methodology workshop. (Table I)

Table I: Current Practices of research by undergraduate MBBS students.

Question	Positive Response % (n)	Negative Response % (n)
Are you familiar with Research types?	37 (74)	63 (126)
Are you familiar with Research protocols?	22.5 (45)	77.5 (155)
Are you familiar with various data interpretation software/tools?	11 (22)	89 (178)
Do you know that from where ethical approval to start a research on human/animal shall be obtained?	15 (30)	85 (170)

Have you conducted any research?	2.5 (05)	97.5 (195)
Have you presented any research in any conference?	Nil	100 (200)
Did your research got published?	02 (04)	98 (196)
Are you reading medical journals regularly?	12.5 (25)	87.5 (175)
Have you participated in any workshop on research methodology?	Nil	100 (200)
Do you think research increases medical knowledge?	78 (156)	22 (44)
Is there a relationship of critical thinking with research?	80 (160)	20 (40)
In your opinion, our current managements of the patients will change significantly if quality research is available?	85 (170)	15 (30)
Do you think research should be part of MBBS curriculum?	71 (142)	29 (58)
Do you feel motivated yourself towards doing research?	62 (124)	38 (76)
Did you get any grant for your research?	Nil	100 (200)
Do you receive appropriate institutional support?	2.5 (05)	97.5 (195)
Did you get help for statistical analysis from university/hospital?	15 (30)	85 (170)
Do you feel stressed out with the tasks of research?	35 (70)	65 (130)
Do you think your research record should be an important criterion for acceptance in post graduate residency?	36.5 (73)	63.5 (127)

The second part of the questionnaire was about barriers in research. The majority of the students considered that lack of interest of faculty (69%), lack of adequate training (76%), and lack of funding (69%) are barriers in conducting research. On the other hand, 64% of the students believed that non-availability of free literature/journals, 52% considered study burden, 63% considered ethical approval, and 59% considered lack of computer skills to be a barrier in doing research. (Table II)

Table II: Barriers in doing research

Questions	Positive Response % (n)	Negative Response % (n)
Do you think lack of interest by faculty/teachers is a barrier in doing research?	69 (138)	31 (62)
Do you think lack of adequate training is a barrier in doing research?	76 (152)	24 (48)
Do you think inadequate funding is a barrier in doing research?	69 (138)	31 (62)
Do you think the non-availability of free literature/journals is a barrier in doing research?	64 (128)	36 (72)
Do you think the study burden is a barrier in doing research?	52 (104)	48 (96)
Do you think personal commitments/family problems are barriers in doing research?	43 (86)	57 (114)
Do you think the difficulty in obtaining ethical approval is a barrier in doing research?	63 (126)	37 (74)
Do you think a lack of computer skills is a barrier to doing research?	59 (118)	41 (82)

DISCUSSION

Assessment of the current practices and barriers towards research in undergraduate medical students provides an excellent opportunity to look into our system of medical education and research. Pakistan is lagging behind in research. This study helped to formulate new strategies to move forward.

In this study, the majority of our students were not aware of the basics of research while studies conducted in other parts of the world revealed that the majority of the students have moderate knowledge about the subject (Amin et al., 2012; Soe et al., 2018). In the current study more than 90% of the students do not have conducted the research nor have they presented papers in some national or international conference. This study also revealed that students have not received formal training for research in

the form of training workshops or part of the curriculum. The results are not consistent with other studies conducted at leading Private Sector University which revealed that 90% of their students have conducted some sort of research (Khan, Khawaja, Waheed, Rauf, & Fatmi, 2006).

The encouraging thing is that majority of the student (62%) feels motivated for doing research. About 71% of students also believed that research should be part of the MBBS curriculum. More than 75% of students were of the opinion that research increases medical knowledge and it can alter the management regimens. This is surely a very good sign that our students are motivated to do research. This is also in accordance with other studies (Ichsan et al., 2018).

Regarding barriers to doing research more than 50% of the students believed that lack of support by faculty/institute, lack of training, lack of funding, study burden, lack of computer skills, and non-availability of free literature/journals are important barriers in the way of doing research. All of these things are related to the design of the curriculum and institutional support. The results are comparable to other studies conducted in resource constraint countries (Soe et al., 2018).

This is certainly an important area to emphasize upon. Medical schools in Pakistan need to strike through this issue. Without overcoming these issues our students will not be able to compete with students from developed countries. Many students gave the opinion that making research a part of the MBBS undergraduate curriculum and support of the institution in the form of training, guidance by faculty, resource provision, and collaboration with funding agencies can play a pivotal role in grooming the medical students to a good researcher and keen observer.

CONCLUSION

Our study concluded that most of the students are not involved in research but encouraging thing is that these students are aware of the importance of research in the medical profession. We need to devise strategies at institutional levels to strengthen their behavior of knowledge-seeking through research tools.

Limitations and way forward:

It was a single-center study so to generalize the results, large multicenter studies are required.

DECLARATION OF INTEREST

The author report no declaration of interest.

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AUTHORS CONTRIBUTIONS

1. Dr. Muhammad Asif Naveed. Collected the data, Analyzed and wrote the article.
2. Prof. Dr. Raheela Yasmin. Conceptualized the idea, Supervised the whole work, and correction of the articles.
3. Shabbir Hussain. Concept & design of the work, aquisition, analysis interpretation of data and critical review.