



CODEN [USA]: IAJPBB

ISSN : 2349-7750

**INDO AMERICAN JOURNAL OF
PHARMACEUTICAL SCIENCES**

SJIF Impact Factor: 7.187

<http://doi.org/10.5281/zenodo.4303605>Available online at: <http://www.iajps.com>

Research Article

**ASSESSMENT OF THE ATTITUDE OF UNDERGRADUATE
MEDICAL STUDENTS TOWARDS CLINICAL RESEARCH****Kanwal Mushtaq, Farwa Wazir, Kainat Hameed**

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Article Received: September 2020**Accepted:** October 2020**Published:** November 2020**Abstract:****Objective:** To assess the attitude of undergraduate medical students towards clinical research.**Method:** 200 medical students from 3rd year to the final year of MBBS from different medical colleges of Sialkot were enrolled in the study. They attempted a self-designed questionnaire consisting of multiple sections targeted to assess their attitude towards the research. Their response is then recorded and data were analyzed by using SPSS v.20.**Results:** A total of 200 students were included in the study. This study revealed that the knowledge of medical students about clinical research methodology is highly inadequate. Misconceptions are frequent. The interest in conducting research during their professional life is higher in male (82%) students as compared to female (60%). Most students considered research valuable but at the same time, they perceived it as stressful and complex (47%).**Conclusion:** Most of the students were aware of the importance of clinical research and undertaking it, but their attitude to getting into research-related activities was not positive. These statistics demands an urgent need to introduce research programs as a part of the curriculum of medical study, and ensure that these programs meet their goals and continue to be improved by providing good infrastructural facilities to produce skillful physicians to support research-related activities.**Keywords:** Assessment, attitude, research, medical students.**Corresponding author:****Dr. Kanwal Mushtaq,**

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Please cite this article in press **Kanwal Mushtaq et al, Assessment Of The Attitude Of Undergraduate Medical Students Towards Clinical Research., Indo Am. J. P. Sci, 2020; 07(11).**

INTRODUCTION:

In today's world, one of the criteria for progress in the medical field is research. Because it allows us to come up with an understanding of the risk factor, the pattern of disease distribution and progress, incidence of possible complications, and the effectiveness of available treatment modalities, also allow us to try a novel treatment for a disease and thus help the community to fight the illness in a better way.

Research is the systemic investigation into and study of materials and resources to establish facts and reach new conclusions.

The research training should be a critical component of medical school education. Medical schools are expected to train students in research to meet accreditation standards to support student's career prospects and to generate a pool of researchers. Tomorrow's clinicians must be equipped with adequate research training during their undergraduate studies to promote critical thinking, develop critical appraisal skills, and become research-oriented. Research experience is strongly linked to postgraduate research initiatives and future career achievements.

METHOD AND MATERIAL:

This cross-sectional study was conducted in different medical colleges of Sialkot in January 2020. Medical students of 3rd to the final year from respective colleges were enrolled in the study. A self-designed questionnaire consisting of multiple sections targeted to assess students' understanding of research, their

research-related activities, and experience, views about its importance, their perceived barriers to research, and plans to have a research-oriented career. The questionnaire was solved by all the enrolled medical students. Prior consent was taken from respondents and their confidentiality was ensured. We allowed them to ask freely about ambiguities in the questionnaire. The data were tabulated and analyzed in the database using SPSS v.20.

Inclusion criteria

3rd to final year medical students enrolled in a five-year MBBS degree program in the different medical colleges of Sialkot from 3rd to final year, who voluntarily gave consent and filled the questionnaire.

Exclusion criteria

All students in 1st and 2nd year of MBBS, those students of 3rd to final year who didn't give consent, and faculty members of respective colleges.

RESULTS:

A total of 200 students were included in the study. Out of 200, 47% (94) were males and 53% (106) were females. Overall 46.5 (93) students said they are aware of research methodology. The research was considered useful for their professional careers and relevant to their daily life by 63% (127) students, while 76% (152) did not consider it worthwhile to pursue research as a career. Besides, 89% (178) of students interested to be a part of the research, while 47% (94) perceived research as a stressful and complex activity.

Table 1 Gender distribution

	Frequency	Percentage
Female	106	53
Male	94	47

Table 2 Understanding about clinical research

	Frequency	Percentage
Discovering a new drug molecule	31	15.5
Doing experiments on animals	41	20.5
Gathering information about a diseases	28	14
Making a new machine for healthcare	4	2
Analysis of facts and figures about a disease or treatment	96	48

Table 3 Aware of clinical research methodology

	Frequency	Percentage
Yes	93	46.5
No	107	53.5

Table 4 Interest in Research related activities and experience

	Frequency	Percentage
Reading medical journals	22	11
Like to watch medical research based programs	73	36.5
Attended any workshop on research training	4	2
Want to be a part of the research	178	89
Conducted a research	63	31.5
Found it interesting	123	61.5

Table 5 Perceived barriers to clinical research

	Frequency	Percentage
Time taking	123	61.5
Lack of skill	87	43.5
Stressful and complex	94	47
Lack of resources	127	63.5
Difficulty in patient follow up	133	66.5
Lack of encouragement from senior	93	46.5

Table 6 Views about the importance of clinical research.

	Frequency	Percentage
Should be a critical part of medical studies	153	76.5
Enhances analytical skills of healthcare professionals	51	25.5
Being updated with the latest research helps a doctor to improve treatment	64	32
Enhances diagnostic and therapeutic measures in the medical field	87	43.5
Plan to actively research during professional life		
Male	78	82.9
Female	64	60
Relevant to daily life	127	63.5
Pursue research as a career	48	24

DISCUSSION:

Research is an important element in the advancement and up-gradation of the health-care system which is accessible to the general population. To carry out research adequate knowledge, a positive attitude, and acceptable skills are required. We intended to assess the knowledge, attitude, practice, and barriers to research among undergraduate students. Barriers to research were time taking (61.5%), lack of skills (43.5%), stressful and complex (47%), lack of resources (63.5%), and difficulty in the follow-up of patients (66.5%). In our study, the major barrier as opined by students difficulty in the follow-up of patients followed by lack of resources. Studies from Arabian countries, Canada, and India have reported similar findings regarding barriers to research. 93 Students (46.5%) felt that there was a lack of encouragement by faculty as most of the students opined having adequate motivation and support by faculty to carry out research. The barriers need to be discussed at the administrative level to bring in changes to reduce the obstacles faced by students. The selection bias may be a major limitation of this study as only the participants who were willing to be a part of the study were included.

One cross-sectional study conducted at Shifa College of Medicine, Islamabad, Pakistan from May to November 2013, and comprised undergraduate medical students. A pretested questionnaire was used for data collection. Students response was recorded on a scale from “STRONGLY DISAGREE” to “STRONGLY AGREE”. The analysis was done using statistical SPSS17. Overall, 78 (45.3%) students said they were aware of the research.

The main aim of emphasizing the creation of research interest is to provoke intuition in medical students. As the educational system of Pakistan is mostly theoretically based. It is diminishing the ability to think among students. So research plays an exceptional role in provoking the self intuition among medical students to search for the identification of risk factors, causative agents, and the most effective treatment option available. To develop new ideas related to health-related issues. When new ideas enlighten the mind it destines oneself towards the new methods of technology among the developed countries. And how the technical and other resources can be utilized to invent new things. The results of the research show the extent of the spread of

disease to the community, and thus guide us about the need for measures that should be taken to control the extent of spread either at the community level or the government program. It is quite indispensable for medical students to incline research because it polishes the previous knowledge and welcomes the new one.

CONCLUSION

Most of the students were aware of the importance of research in the medical profession and undertaking medical research, but their attitude to getting into research-related activities were not positive. The study reports are limited to colleges. These findings should be conveyed to students to encourage them to know about their knowledge and perception. The barriers need to be discussed at the administrative level to bring in changes to reduce the obstacles faced by students. The selection bias may be a major limitation of this study as only the participants who were willing to be a part of the study were included.

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