

ATTITUDE OF OPTOMETRY STUDENTS TOWARDS RESEARCH AT UNDER GRADUATE LEVEL IN PAKISTAN

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ABSTRACT

PURPOSE: The main objective of my study was to assess the attitude of optometry students towards research at undergraduate level in Pakistan and to bring positive changes in the research process if the factors contributing to the attitude of students can be recognized.

METHODS: A descriptive cross-sectional study was conducted in 258 randomly selected students from various institutes of Pakistan. Both male and female of different age group was asked to fill a self-designed online questionnaire. Data was analyzed by descriptive statistics.

RESULTS: Total 258 students were enrolled in this study. 64.3% students believed that research plays an important role in the field of optometry. 62.4% agreed that research should be made compulsory at undergraduate level. 77% students had an interest in the clinical field. The main factors affecting the attitude of students towards research were the role of supervisor, the habit of reading journals, and time consuming nature of research, facilities and equipment provided by the institute. 57% respondents intended to pursue research after graduation.

CONCLUSION: Undergraduate optometrists showed a positive attitude towards research participation. The majority believed that research plays important role in the development of skills. The main obstacles like inadequate role of supervisor, time consuming nature of research, lack of reading habit, inadequate facilities provided by institutes decreased interest of students in research conduction. There is need of taking active steps to minimize the obstacles.

KEYWORDS: Attitude, Optometry, Students, Research, Undergraduate level, Pakistan.

INTRODUCTION

Research is defined as a process of assembling data to increase the standard of knowledge, custom and culture to discover and understand new information that would initiate, modify or terminate present understanding.¹ Research is general and inventive work undertaken to increase the standard of knowledge. Recent years have perceived a significant progress in research that reviews students' ideas about natural phenomena. The principal style of previous research was based on elaborating experimental designs and compound statistical analysis of facts. Basically, there are two main methods of research that can be used in the study of the public and the individual

world namely quantitative and qualitative research.²

According to the World Council of Optometry, optometry is a healthcare profession that is autonomous, educated and regulated (licensed/registered) and optometrists are the primary healthcare practitioners of the eye and visual system, who provide comprehensive eye and vision care, which includes refraction and dispensing, detection/diagnosis and management of disease in the eye and the rehabilitation of conditions of the visual system.³⁻⁵ Optometry is also vital for providing highly competent eye care services and it is now clear that optometry can help

to limit the most preventable causes of blindness. It contributes to better understanding of the visual system.⁶

The World Council of Optometry has established an assignment and legislative policies to expand the conveyance of eye and vision care everywhere in the world, as well as to grow the profession of optometry. Its development over the past decades is an honor to the early innovators in international optometry who generously offered their time and proficiency to advance the profession and eye and vision care.⁷ Research is an essential part of medicine. The developing medical sciences demand that research methodology should be made compulsory in the undergraduate medical curriculum.⁸ Many problems have been described to hinder a student's capability to conduct research. Some hurdles include lack of a devoted research team, consistent internet access, and lack of mentorship, lack of encouragement, lack of time and lack of sufficient research training. These hurdles seem to be more renowned in developing countries.⁹

The Council on Research is an established committee of the American Optometric Association (AOA) made years ago by a group of devoted leaders within optometry who acknowledged the significance of research to the future of the profession but also recognized the unique role and responsibility that the AOA has to facilitate and support for vision research.¹⁰ Research conducted by the optometry institutions covers a wide range of topics including Basic, Applied and Clinical research.¹¹

In past years, a number of optometrists have published their research in Medical Journals.¹² There is still the custom of sending scientific optometric documents to Ophthalmology journals with the purpose of gaining a better acknowledgement of the efforts performed by the researchers. Optometry researchers need familiar journals where they could report the outcomes of

their investigations.

It is crucial to evaluate the attitude of optometry students toward research in Pakistan. By recognizing the attitude towards research, findings can affect how instructors teach research, as attitudes cannot be directly observed, but can be inferred from individuals' self-reports and behaviour.¹³ The purpose of this study is to know the attitude of optometry students towards research and barriers faced by them during the conduction of research.

MATERIALS AND METHODS

A descriptive cross-sectional study was conducted at College of Ophthalmology and Allied Health Sciences, King Edward Medical University, Lahore. Non-probability convenient sampling method was used for data collection. Data was gathered by self-designed online questionnaire filled by Optometry students involved in the research work studying in different institutes of Pakistan. The obtained sample size was 258. Demographic data like age, gender, college and year of study was noted. Students who were not willing to participate in this survey were excluded. Frequency and percentages of variables were calculated and tables were used to present the data. Students were informed about the aim of the study. The research protocol was approved by the Ethical Review Board of College of Ophthalmology and Allied Vision Sciences.

RESULTS

In this study 258 students participated. Out of them, 150 were females and 108 were male. 79.1% students joined optometry by choice. 77.1% students were more interested in clinical students used to read journals sometimes. 57.4% students intended to pursue research after graduation (Table.1). 64.3% believed that research plays an important role in this field. 62.4% students responded that research should be made compulsory at undergraduate level. 58.5% responded that students do their research

willingly. 50.8% students used to take research seriously at undergraduate level. 64.3 % agreed that students get proper allocated time for research. 59.3% responded that research is a time-consuming process. 42% were satisfied about the provision of facilities. 50.4% responded that problems are faced during research work. 70.9% believed that research helps in the development of skills. 71.3% believed that research promotes group work. 64.7% students felt nervous during research work and 46.1% of students were satisfied with the process of research (Table.2).

Graph -1: Institution Distribution

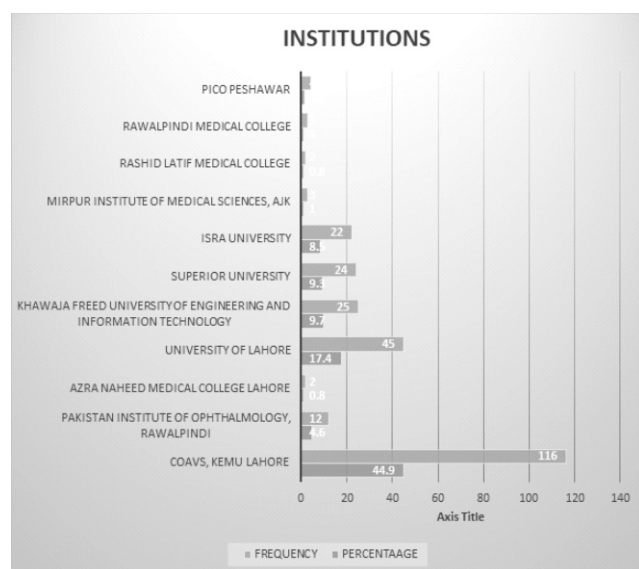


Table -1: Student's Interest

Variables	Responses		
	Yes	No	Maybe
Did you join optometry by choice?	204(79.1%)	54(19.9%)	
Students are more interested in?	Clinical Field 199(77.1%)	Basic Field 59(22.9%)	
Do you read Medical journals?	51(19.8%)	67(26%)	140(54.3%)
Is there still room of betterment?	98(38%)	39(15.1%)	121(46.9%)
Do you intend to pursue research after graduation?	148(57.4%)	33(12.8%)	77(29.8%)

Table -2: Questionnaire Distributed Among Optometry Students (n=258).

VARIABLES	FREQUENCY				
	AGREE	STRONGLY AGREE	NOT SURE	DISAGREE	STRONGLY DISAGREE
Research plays important role in your field.	166(64.3%)	81(31.4%)	6(2.3%)	4(1.6%)	1(0.4%)
Research participation should be made compulsory at undergraduate level.	161(62.4%)	45(17.4%)	27(10.9%)	24(8.9%)	1(0.4%)
Students do their research willingly.	151(58.5%)	22(8.5%)	26(10.0%)	55(17.4%)	4(1.6%)
Students take research seriously at undergraduate level.	131(50.8%)	40(15.5%)	25(9.7%)	52(20.5%)	8(3.1%)
Students get proper allocated time for research.	166(64.3%)	20(7.8%)	23(8.9%)	39(15.1%)	9(3.5%)
Role of supervisor is adequate in guiding you during research.	103(39.9%)	49(18.9%)	10(3.9%)	92(35.6%)	4(1.6%)
Research is time consuming process.	153(59.3%)	65(25.2%)	21(8.1%)	16(6.2%)	3(1.2%)
Facilities provided by your institute are adequate for research.	108(42.0%)	15(5.8%)	23(8.9%)	93(35.9%)	18(7.0%)
Provision of equipment for research is enough for you.	134(52.4%)	13(5.4%)	40(15.5%)	60(23.2%)	9(3.5%)
Problems are faced during research work.	130(50.4%)	69(26.6%)	11(4.3%)	47(18.3%)	1(0.4%)
Undertaking research increases burden	135(52.4%)	23(8.9%)	19(7.5%)	65(25.2%)	16(6.0%)
The academic environment is helpful in your research work.	108(41.8%)	38(14.7%)	17(6.6%)	91(35.2%)	4(1.6%)
Research helps in development of skills.	183(70.9%)	65(25.2%)	7(2.7%)	1(0.4%)	2(0.8%)
Research work motivates and encourages you.	196(76.0%)	43(16.7%)	12(4.7%)	6(2.3%)	1(0.4%)
Research promotes group work.	184(71.3%)	42(16.3%)	20(7.8%)	7(2.7%)	5(1.9%)
Students feel stressed and nervous during research.	167(64.7%)	49(19.0%)	25(9.7%)	14(5.4%)	3(1.2%)
Students are satisfied with the process of research.	119(46.1%)	16(6.2%)	42(16.3%)	71(27.5%)	10(3.9%)

DISCUSSION

A survey among students of optometry studying in different institutes of Pakistan gave us information about the knowledge and attitude of students towards research conduction at undergraduate level. It was necessary to assess the attitude of students towards research in various institutes of Pakistan. The main purpose of my study was to know the students' response and to highlight the areas with deficiency that should be improved.

All the above mentioned results show that students showed positive attitude toward research at undergraduate level. Undergraduate students showed more positive response as compared to

postgraduate students($p=0.001$).¹⁴ In my study, 62.4% students responded that research should be made compulsory at undergraduate level. A survey in Riyadh, Saudi Arabia also depicts that research should be made compulsory at undergraduate level.¹⁵

Research plays an important role in the field of optometry. According to a study, research is a challenge and an opportunity to show everyone the scientific capability of optometrists. It allows us to advance our clinical procedures to increase our knowledge.¹⁶

The response of students regarding reading medical journals was determined and it was concluded that only 19.8% students had the habit of reading medical journals. 54.3% students used to read journals sometimes. A study conducted in Agha Khan University in the past year showed that only 20% students used to read journals.¹⁸

To determine the participation of students in research process few questions were asked and it was concluded that most of the students did their research willingly. But lack of facilities and problems faced during the conduction of research reduced the interest of students in participating. Lack of guidance and lack of knowledge regarding research were the main barriers in a survey by Khyber Medical College.¹⁸

In this survey, 77.1% students showed their interest in the clinical field. Students participating in the study of William KJ and Hill CP also showed more interest in the clinical field as compared to basic field.¹⁹

Adequate role of supervisor is important to develop interest in students to take part in conduction of research. In this study, a question was asked about the role of supervisor and it was concluded that most of the students were satisfied with their supervisor. However, 36% students responded about the inadequate role of supervisors which is a key element in discouraging students from involvement in research. Students

who were encouraged by their supervisors to participate in the research were more likely to participate in research work.⁹

To analyze the motivation during research, few questions were asked and it was clear that research work motivated and encouraged the student all over Pakistan. Moreover, most of the students agreed that research work helped in the development of skills. It helped in getting more knowledge regarding the research topic and improved communication skills. Most of the students believed that research promoted group work. Research skills are very important for pursuing a medical career.²⁰ Time consuming nature of research, Inadequate supervision and insufficient provision of facilities were the main reason for feeling stressed during research work. Few questions were asked to know the satisfaction level of students and it was concluded that most students were satisfied with the process of research. There is still a need of improving research methodology according to the international level of research conduction. Suggestions were also given by many students for the betterment of research procedure. They believed that proper projects should be conducted to enhance skill. Provision of proper time, facilities, equipment and funds for travelling to respective areas for research should be assured. The Supervisor has key role during research. There should be proper counseling of students before and during conduction of research.

Last question was asked about intention of student to pursue research after graduation. The majority of students responded that they will. In a study commenced by Tosoo A, 11% students were doing research and 24% students were interested to pursue research after graduation.²¹

It is concluded from the above discussion that students of optometry in various institutes of Pakistan showed a positive attitude towards research, but due to lack of habit of reading the journals, insufficient provision of facilities and

inadequate role of supervisor they felt nervous which decreased the interest of students to get involved in research conduction.

CONCLUSION

It is concluded that students showed a positive attitude towards research participation. The majority believed that research plays an important role in the development of skills. The main obstacles like inadequate role of supervisor, time consuming nature of research, lack of reading habit, inadequate facilities provided by institutes decreased interest of students in research conduction. There is need of taking active steps to minimize the obstacles.

RECOMMENDATIONS

It is recommended that institutes should be established in all provinces of Pakistan to improve the eye health care services. International research methods should be adapted in the academic curriculum to develop skills and knowledge regarding research conduction. Provision of favorable environment and cooperation between researchers and mentor can increase the interest of students in research participation. More researches should be conducted in Pakistan in the field of optometry for advancement. Research workshops should be conducted and recognized journals should be inaugurated for publication.

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