

PERCEPTION, ATTITUDES AND BARRIERS TOWARD MEDICAL RESEARCH IN REHMAN MEDICAL COLLEGE, PESHAWAR, PAKISTAN

by Fazia Raza

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PERCEPTION, ATTITUDES AND BARRIERS TOWARD MEDICAL RESEARCH IN REHMAN MEDICAL COLLEGE, PESHAWAR, PAKISTAN

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Abstract

Objectives

To know the perception attitude and barriers toward medical research of medical students of Rehman medical college.

Method

A cross-sectional structured questionnaire was completed by 150 medical students at Rehman medical college. The questionnaire consisted of 16 questions. The students response was recorded on a Likert scale from strongly agree 1 to strongly disagree 5. The collected data was analyzed by SPSS version 17.

Results

Of the 400 students enrolled 150 of the student's responded. 70% of the students had previous experience in research and 92 % agreed that research is an important component of medical education. 88.6% considered research as a mandatory component of medical school curriculum.

The motives of the student's behind conducting Research during medical school included Research being mandatory in curriculum (88.6%), facilitating

acceptance to residency program (40.7%), Appreciation and acknowledgement by teachers (47.3%) and Research by peer (46.7%).

The barriers were Lack of interest, extensive medical curriculum, examphobia and lack of training in scientific literature and research methodology.

Conclusion

The majority of students in the study showed diverse and positive attitudes and perceptions toward medical research. Addressing perceived students barriers can help in an improvement in Research activities among medical Students.

Introduction:

This is an era of evidence based practice and Research is an important component of medical practice. Without Research no new development would have come in health care. Medical student exposed to research have the advantage of getting residency in prestigious training programs if they have publications. After post-graduation our college requires either two published papers in an indexed journal or Dissertation.¹The Pakistan Medical and dental council view research qualifications at par for appointments in teaching medical institutions. The higher education commission is now working toward a strong research culture at a doctoral level .Research papers are required for promotion however the trend of writing papers after achieving the professional level is low .²

Worldwide there is a growing interest among the medical faculty to do research. Many institutions have adopted the scholar role as one of the core competencies .There has been a significant movement towards providing medical students with early research experience with in medical school curriculum. There has been a documented decline in the number of Physician scientists in medical practice.³ A number of technical-based specialties have expressed concern of professional stagnation without the constant reconstruction afforded by the development of novel clinical and basic science knowledge. ^{2, 3, 4} Postulated explanations for the decline of the physician-scientist include less financial incentive, family, practice philosophy and inadequate exposure to research before career paths are determined .^{5,6,7} The Royal College of Physicians and Surgeons of Canada has adopted the Scholar role as one of the core competencies of specialty training that has translated to the expectation of a contribution to

research in training. However, published studies regarding resident and medical student research in specialty training has documented ambivalent attitudes regarding its value with as much as 75% of residents preferring to engage in other scholarly activities as compared to research.² Other proposed remedies to reverse this disinclination towards basic science or clinical research output by practicing physicians include the implementation of MD-PhD programs, fostering research in sub-specialty fellowships and increased exposure to research at the medical school level by means of medical scientist training programs.¹ Furthermore, there has been a significant movement towards providing medical students with early research experience within the medical school curriculum.

Significance of the proposed study:

There is increasing demand of research in undergraduate medical curriculum, as well as in post graduate, it appears pivotal to inquire into the experience of research during medical school. It is important to know the prevailing attitudes and perceptions of the students toward research so that strategies can be formulated to motivate them for research. The objectives of this study are to know the perception of medical students of Rehman medical college towards research and investigate their perceived goals and barriers to such endeavors during their educational experience.

Material and Methods

This study was conducted at Rehman Medical College Peshawar Pakistan from 15th may 2016 to 15th June 2016. The study was based on Constructivist Research Paradigm and study design was Cross sectional. The study population comprised of 1st, second year and third and fourth year Medical students with a Sample size of 400. Sampling Technique was non probability convenience sampling.

Authorization to conduct the study was taken from Institutional Ethical Board.

Data was collected through a Questionnaire. The Questionnaire consisted of 16 questions. Questionnaire was developed after pilot questionnaire on 10 students. Students response was recorded on the Likert scale for each question from strongly agree 1 to strongly disagree 5.

The questionnaire was distributed to about 400 participants after their informed consent ensuring about their confidentiality and anonymity. It was distributed in first, second and third and fourth year class after the lectures and was supplemented by emails to all respective students having email accounts so as to get maximum response. Reminders at weekly intervals was sent by Email to all participants to collect the filled in questionnaires.

Data was analyzed by SPSS version 17. Frequencies and percentages were calculated for categorical variables. Mean and Standard deviation was calculated for numerical variables.

RESULTS

Of the 400 students, 150 students responded and returned the questionnaire. Out of 150 students, First year students were 22 (14.7%), 2nd year students were 49(32.7%), 3rd year 26(17.3%) and 4th year students were 53 (35.5%). 81 (54.0%) students were male and 69 (46.5%) was female .The mean age of the students was 21.67 years.

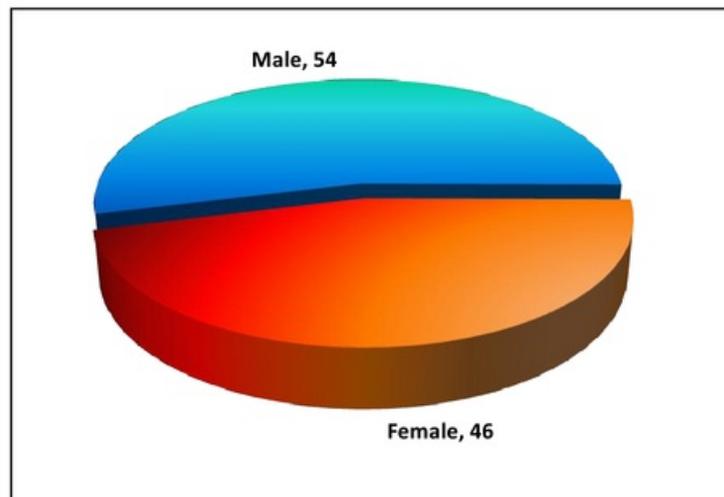
Descriptive Table:

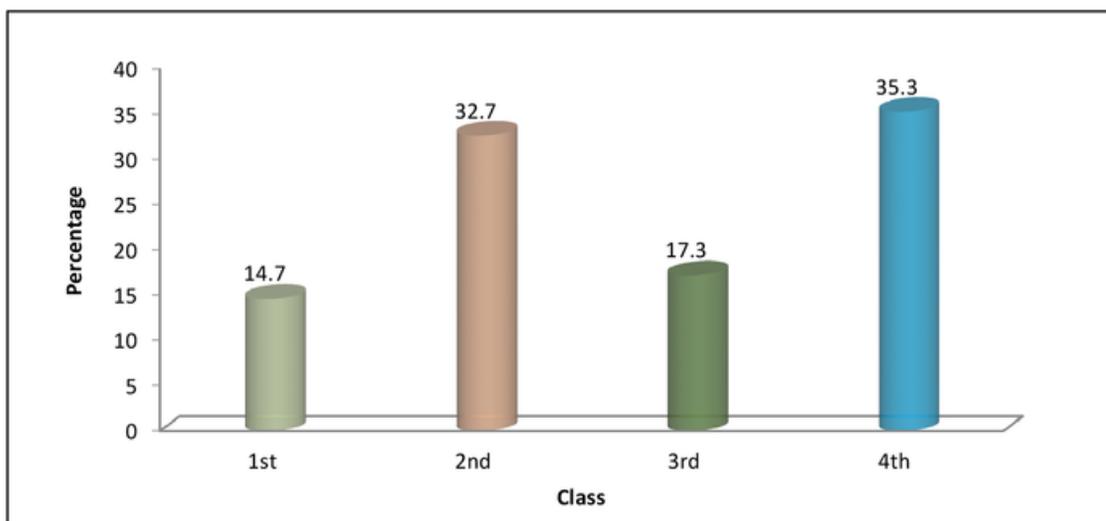
Sex wise Distribution:	Frequency	Percent
Male	81	54.0
Female	69	46.0
Class wise Distribution:		
1 st	22	14.7
2 nd	49	32.7
3 rd	26	17.3
4 th	53	35.3
Age wise Distribution:		
19	7	4.7
20	27	18.0
21	29	19.3
22	45	30.0
23	32	21.3
24	7	4.7
25	3	2.0
Previous Experience in Research:		
Yes	105	70.0

No	45	30.0
Total	150	100.0

Mean	21.67
Std. Deviation	1.366
Minimum	19
Maximum	25

Fig1: Gender Percentage:





70% of the students had previous experience in Research. During the study the majority of the students agreed that Research is an important component of medical education (92%). 88.6% of the students believes that Research should be a mandatory component of medical school curriculum, where as 4.7% disagreed with it and 6.7% had a neutral response.

Although majority of students (66%) had no interest in Research, 16.7% of them were interested and 17.3% had neutral response. Of the medical students at RMI 90.6% considered Medical Research as part of long term career goal.

40.7% of the students considered that Research experience should be important criteria for accepting Residency while 48.7% disagreed to it.

The Barriers to conducting Research varied widely. 5.8% of the students thought that they don't have **adequate time in medical school to pursue Research**.

Lack of training in Research methodology and in reviewing scientific literature was another barrier. Majority of the students (50.6%) in RMI thought they had adequate training in Research methodology, 24% had neutral response and 25.3% said they have Lack of training.

For adequate training in reviewing scientific literature 33.3% had a neutral response where as 35.4% thought there training is adequate and 31.4% disagreed to it.

Research mentors are easily available to medical students in RMI in 43.3% of the students where as 51% disagreed to it and 22.7% a neutral response had. According to students the supervisor offer good training and guidance in 50% of the students, where as 28% of the students disagreed to it and 26% had a neutral response.

Exam phobia was another barrier to conducting Research.49.3% though that because of Exam phobia they cannot perform Research, 34.7% disagreed to it and 16% had neutral Response.

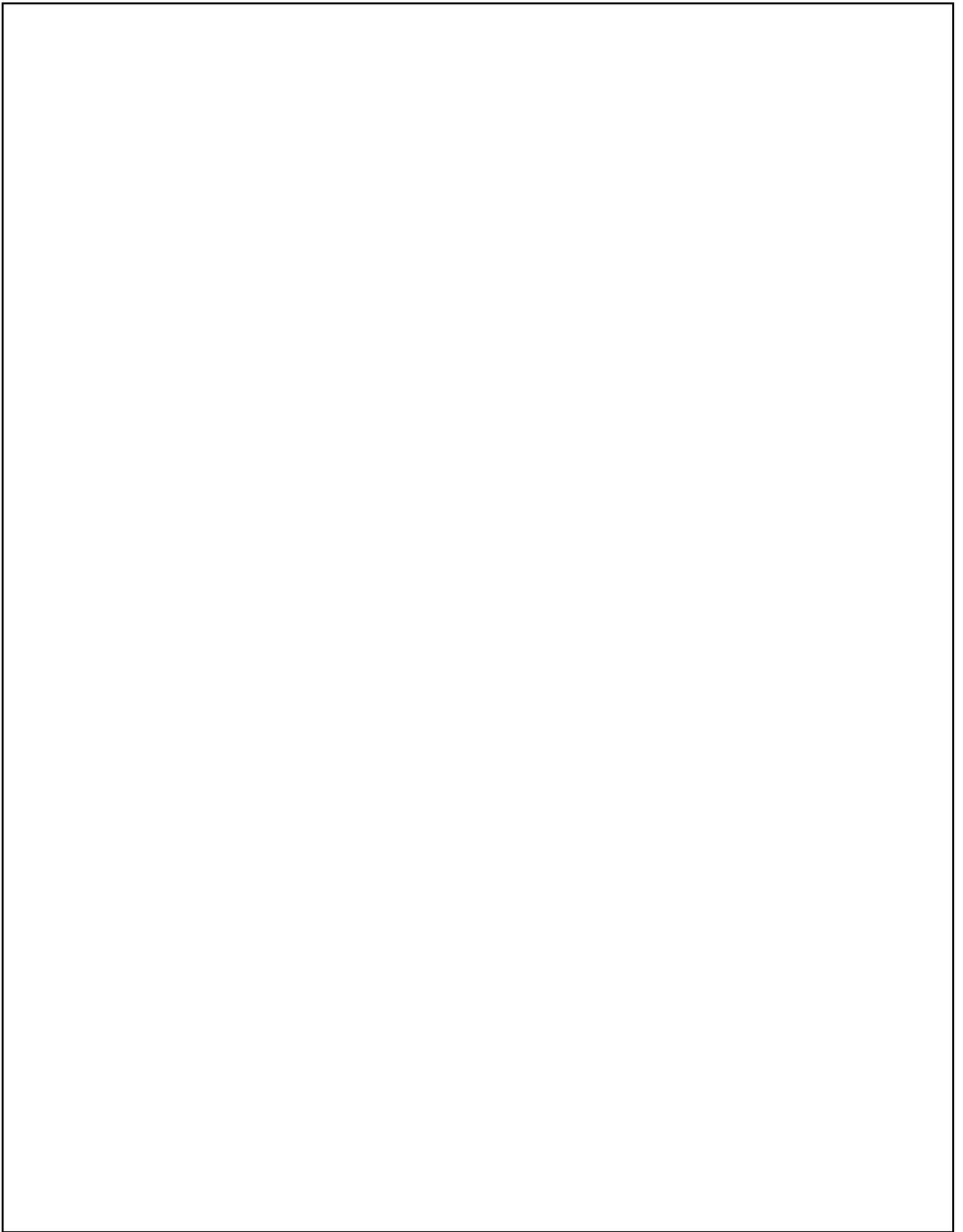
Majorly of the Medical students at RMI thought that they had adequate opportunity to present (66%) and publish (45.4%) Research during medical school.

The motives of the students behind conducting Research during medical school included Research being mandatory in curriculum (88.6%), facilitating acceptance to residency program (40.7%), Appreciation and acknowledgement by teachers (47.3%) and Research by peer (46.7%).

Descriptive Table:

Parameter	4 Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly Disagree
In consider Research as important component of medical education	72 (48)	66 (44)	6 (4)	5 (3.3)	1 (0.7)
I am involved in research because it is mandatory:	53 (35.3)	80 (53.3)	10 (6.7)	6 (4)	1 (0.7)
I have no interest in research:	7 (4.7)	18 (12)	26 (17.3)	57 (38)	42 (28)
I consider that Research will be a part of long term career goals:	65 (43.3)	71 (47.3)	8 (5.3)	2 (1.3)	4 (2.7)
I consider that research should not be an important criteria for acceptance to residency:	16 (10.7)	49 (32.7)	24 (16)	43 (28.7)	18 (12)
I think that Medical school curriculum should have mandatory time for research:	71 (47.3)	51 (34)	21 (14)	5 (3.3)	2 (1.3)

Parameter	4 Strongly agree	Agree	Neither agree or disagree	Disagree	Strongly Disagree
In consider Research as important component of medical education	72 (48)	66 (44)	6 (4)	5 (3.3)	1 (0.7)
I am involved in research because it is mandatory:	53 (35.3)	80 (53.3)	10 (6.7)	6 (4)	1 (0.7)
I have no interest in research:	7 (4.7)	18 (12)	26 (17.3)	57 (38)	42 (28)
I consider that Research will be a part of long term career goals:	65 (43.3)	71 (47.3)	8 (5.3)	2 (1.3)	4 (2.7)
I consider that research should not be an important criteria for acceptance to residency:	16 (10.7)	49 (32.7)	24 (16)	43 (28.7)	18 (12)
I have adequate time in medical school to pursue research:	3 (2)	41 (27.3)	19 (12.7)	41 (27.3)	46 (30.7)
I am involved in research because it is beneficial in post graduate education:	63 (42)	61 (40.7)	21 (14)	3 (2)	2 (1.3)
I receive adequate training in research methodology in medical school.	17 (11.3)	59 (39.3)	36 (24)	30 (20)	8 (5.3)
I receive adequate training in reviewing scientific literature:	7 (4.7)	46 (30.7)	50 (33.3)	31 (20.7)	16 (10.7)
Research mentors are easily available to me:	12 (8)	53 (35.3)	34 (22.7)	36 (24)	15 (10)
Research supervisors offer good training and guidance to me:	12 (8)	57 (38)	39 (26)	24 (16)	18 (12)
I have adequate opportunities to present research in medical school.	18 (12)	72 (48)	30 (20)	26 (17.3)	4 (2.7)
I have adequate opportunities to publish research during medical school	13 (8.7)	55 (36.7)	42 (28)	4 (22.7)	6 (4)
Appreciation and acknowledgment by teachers to do research is sufficient	17 (11.3)	54 (36)	40 (26.7)	28 (18.7)	11 (7.3)
I am doing Research because my peers are doing it.	9 (6)	61 (40.7)	39 (26)	32 (21.3)	9 (6)
I am not interested in research because of exam phobia.	30 (20)	44 (29.3)	24 (16)	37 (24.7)	15 (10)



Discussion

Research is an important component of advancement and improvement in health care services. Understanding the perception of medical students will help us in devising methods to improve research practices in future doctors.

Our results are comparable to the study performed by Siemen et al 2010 who said that research will be beneficial to the medical education by majority of students and 44% felt that research will be a part of long term Career goals. However in our study 90.6% of Students considered medical research as part of their long term career goals.

The negative perception of students toward research have been found as a barrier in learning and performing research. Most of the students are not interested in research because they are not aware of the importance of research in health care. Lack of research culture in our institutions, student conferences and workshops facilitate such negative perception.

Lack of time was also seen as an important barrier in persuading research because of extensive medical curriculum. Our results in this regard are comparable to the study performed by Siemen et al 2010. In this study, lack of time was a significant barrier to pursuing research during medical school however 31% of the respondent felt that there was adequate time for research projects. The other barriers to participating in research in our study included lack of training in reviewing scientific literature and research methodology, lack of professional supervisor and interest in research and exam phobia.

Research is not concerned a part of the medical school curriculum in many developed countries. However in our institute it was a mandatory component of medical school curriculum.

Our results are comparable to the study performed by Siemen et al and study performed by Miraj et al who said that research will be beneficial to their medical education by majority of students however 44% felt that ¹research will be part of their long term career goals. However in our study ⁵90.6 % of students considered medical research as Part of their long term career goals.

The limitation of the study is that Results are limited only to the local institution and it's not possible to generalize the findings Verification of the data not possible. It does not represent research attitude trends and Class attendance has affected the response rate.

CONCLUSION

The student's perceptions about research at Rehman medical college were diverse. Majority of the students considered Research helpful in achieving their career goals. However lack of time and extensive curriculum at medical school are important barriers in pursuing Research. Addressing perceived students barriers can help in improvement in Research activities in medical students.

Appendix 1:Questionnaire

Nameclass:1styear/2nd
year/third year/fourth year (Please tick the year of your class)

Age

Gender

Date

I am voluntary participating in this research and I have been informed
about its benefits and consequences. Signature.....

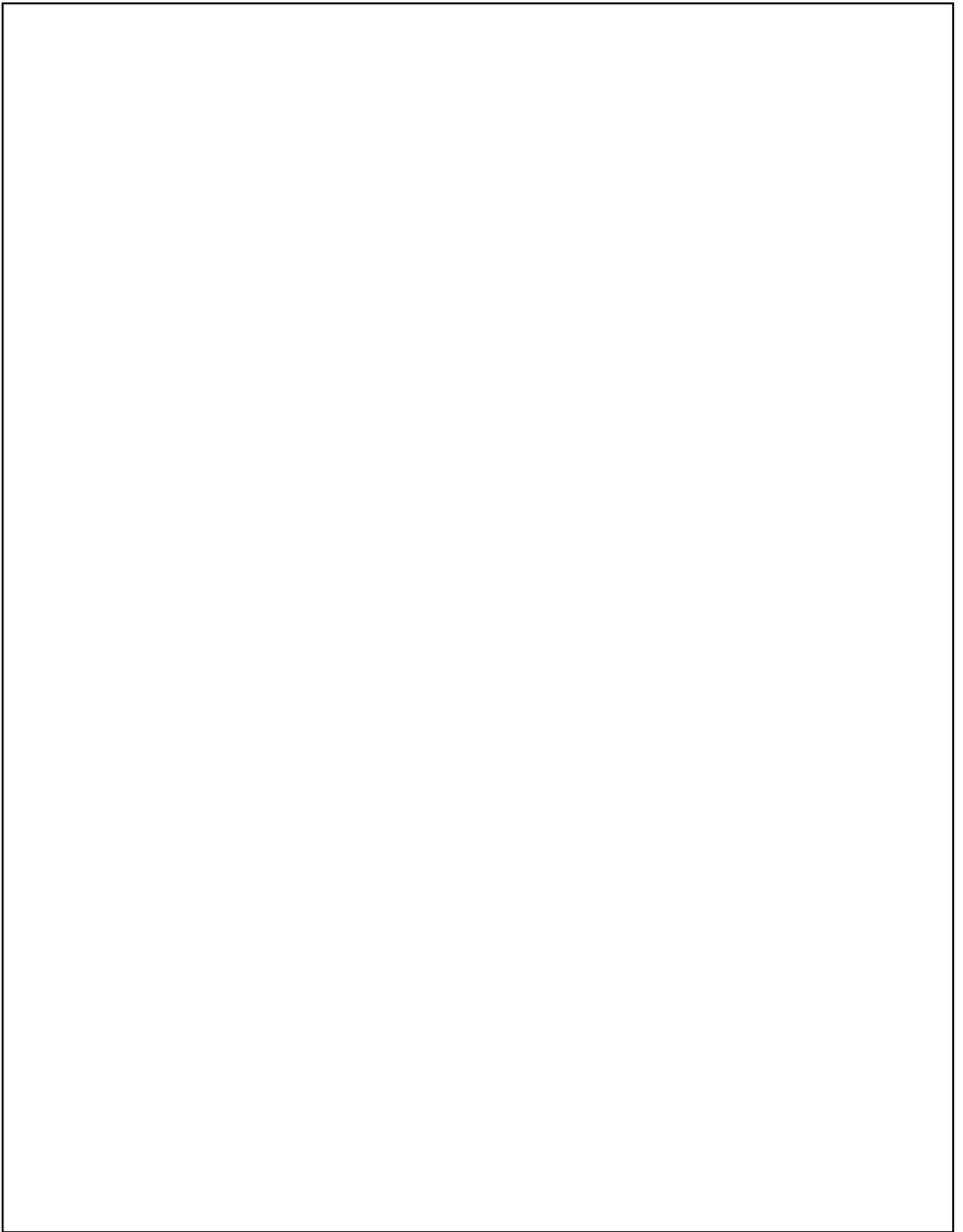
I have Previous experience of Research Yes NO.....(please
encircle the appropriate response)

Please tick the most appropriate response below.

- 4**
- 1 Strongly agree 2 Agree 3 Neither agree or disagree**
- 4 Disagree 5 strongly disagree**

Research attitudes	1	2	3	4	5
I consider Research as important component of medical education					
I am Involved in research because it is mandatory					
I have no interest in research					
I consider that Research will be a part of long-term career goals					
I consider that Research should not be an important criteria for acceptance to residency					
I think that Medical school curriculum should have mandatory time for research					
I have Adequate time in medical school to pursue research					
I am involved in research because it is beneficial in post graduate education					
I receive Adequate training in research methodology in					

medical school					
I receive Adequate training in reviewing scientific literature					
Research mentors are easily available to me.					
5 Research supervisors offer good training and guidance to me.					
I have adequate Opportunities to present research in medical school					
I have adequate Opportunities to publish research during medical school					
Appreciation and acknowledgment by teachers to do research is sufficient					
I am doing Research because my peers are doing it					
I am not interested in research because of exam phobia					
Any other comments					



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