

# Attitude towards research among medical interns: A study from tertiary institute

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## Abstract

**Background:** Research is the key element which influences the learning and future career of the students. The difficulties that students experience in research methods and statistics courses may result in poor learning due to which they have difficulty in completing their degrees. Students have diversified views on research attitude which plays a key role in their careers. **Aims and Objectives:** To study the attitude towards research among the medical interns and to compare the attitude towards research among male and female interns. **Methods:** This study was carried out at department of psychiatry of a tertiary care hospital. Study sample includes the house surgeons doing their internship. After prior consent, a self prepared questionnaire which included socio demographic data was applied to the sample. Attitude towards research was measured by using Attitude towards research scale (ATR Scale). Statistical analysis was done using EPI INFO and Microsoft Excel software. **Conclusion:** The attitude towards research among medical interns is variable and female interns have a more favorable attitude towards research than male interns.

**Key Words:** Attitude, Research, House surgeons.

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students reveal that research should be included in the curriculum of the teacher training program. The use of technology is highly recommended especially on statistical concepts at the university level. Fundamental research skills are vital for all university graduates, and an understanding of the application of research in educational systems provides students with tools for understanding research.<sup>2</sup> Limited data is available on attitude towards research among the medical interns on which the current study focuses.

## INTRODUCTION

Research plays an important role in the current medical curriculum and attitude towards the research plays a key role in students' involvement in research activities. Undergraduate students have diversified views on statistics and research. Many of the students are of the view that statistics is very stressful, unpleasing, difficult and boring<sup>1</sup>. Research among the undergraduate students influences the learning and future career of the students. The difficulties that students experience in research methods and statistics may result in poorer learning which leads to problems in completing their courses. Earlier studies on research among the undergraduate

## MATERIALS AND METHODS

This study was carried out at the department of psychiatry of a tertiary care hospital. Study sample included all medical interns at our hospital. Institutional ethics committee approval was sought before starting the research. After prior consent, a semi structured proforma for recording the socio demographic data was applied to the sample. Attitude towards research was measured by using ATTITUDE TOWARDS RESEARCH scale (ATR Scale). Statistical analysis was done by using EPI INFO and M.S. Excel software.

**Attitude towards research questionnaire:** It is a 30-item, self-rated, Likert scale which measures research attitude on the basis of five factors: The five factors

included in the questionnaire were: usefulness of research in a career, research anxiety, positive attitudes toward the research, relevance of the research to life, and research difficulty. Attitudinal statements were scored on a 7-point Likert scale varying from 1.Strongly disagrees to 7. Strongly agree. More the mean value of the response, more is the positive attitude and vice versa.

**RESULTS**

The current study comprises of hundred individuals doing their internship. Among the total individuals (n=100),

males constituted forty eight and females constituted fifty two in number which shows that females outnumbered males. It was observed that most of the individuals completed their undergraduate course with percentages between 60-70%. Most of the individuals belonged to middle socio economic group (n=40) rather than low or high socio economic group. Regarding the marriage of the individuals, most of the individuals were unmarried. (Table 1)

**Table 1:**

Parameter	Frequency	Percentage
<b>SEX</b>		
MALE	48	48%
FEMALE	52	52%
<b>RELIGION</b>		
Hindus	64	64%
Christians	28	28%
Muslims	8	8%
<b>MBBS percentage</b>		
Below 60%	14	14%
60-70 %	65	65%
70-80%	19	19%
80-90%	2	2%
90-100%	0	0
<b>SOCIO ECONOMIC STATUS:</b>		
Low	24	24%
Middle	40	40%
High	36	36%
<b>MARITAL STATUS :</b>		
Married	03	03%
Unmarried	97	97%

**Table 2:**

Questionnaire	Total mean	Std Dev	Male means	Std dev	Female means	SD
1. Research makes me anxious.	4.32	2.5619	3.1081	2.633	5.0317	2.2502
2 Research should be taught to all students.	5.36	2.2362	5.1351	2.4626	5.512	2.1013
3. I enjoy research.	5.3	2.0326	5.0811	2.3732	5.4286	1.8114
4. Research is interesting.	5.78	1.8994	5.5405	2.022	5.9206	1.8255
5. I like research.	5.17	2.3271	4.4324	2.3868	5.6032	2.1963
6. Research scares me.	3.51	2.4142	3.8108	2.6961	3.3333	2.2361
7. Research is useful for my career.	6.12	1.46	5.5676	2.1414	6.2629	1.6545
8. I find it difficult to understand the concepts of research.	4.7	2.0326	4.4865	2.4678	4.8254	1.7371
9. I make many mistakes in research.	4.18	2.11	4.1351	2.4739	4.2063	1.8851
10. I love research.	5.28	2.1792	4.9189	2.3849	5.512	2.0389
11. I am interested in research.	5.25	2.1852	4.9459	2.3327	5.4286	2.0923
12. Research is connected to my field of study.	5.89	1.769	5.6757	1.9728	6.0159	1.6411
13. Most students benefit from research.	5.64	1.7438	5.7568	1.862	5.5714	1.6821
14. Research is stressful.	4.41	2.3999	4.1081	2.4242	4.5873	2.387
15. Research is very valuable.	5.41	2.1182	4.8649	2.3233	5.7302	1.9361
16. Research makes me nervous.	3.86	2.2248	3.5405	2.4675	4.0476	2.0669
17. I use research in my daily life.	2.78	2.28	3.2703	2.2317	3.5397	2.3198
18. The skills I have acquired in research will be	5.59	1.9389	5.1892	2.0928	5.8254	1.8187

helpful to me in the future						
19. Research is useful to every professional.	5.75	1.9508	5.3514	2.3	5.9841	1.6896
20. Knowledge from research is as useful as writing.	4.77	2.059	4.9459	2.0541	4.6667	2.0713
21. Research is irrelevant to my life.	3.56	2.2976	3.3784	2.1389	3.6667	2.3962
22. Research should be indispensable in my professional training	4.34	1.9344	4.3514	1.961	4.3333	1.9344
23. Research is complicated	4.19	2.1959	4.2432	2.1655	4.1587	2.2303
24. Research thinking does not apply to my personal life.	4.29	2.4217	4.4054	2.4547	4.2222	2.4193
25. I will employ research approaches in my profession.	4.57	2.1801	3.8108	2.1192	5.0159	2.106
26. Research is difficult.	3.87	2.2232	3.8919	2.2458	3.8571	2.2278
27. I am inclined to study the details of research procedures carefully.	4.58	1.8045	4.6757	2.0283	4.5238	1.6739
28. Research is pleasant	4.98	2.015	4.7838	2.0566	5.0952	1.9977
29. Research-orientated thinking plays an important role in my daily life	5.11	2.1125	5.1081	1.9262	5.1111	2.2296
30. Research is a complex subject	5.3	1.9771	5.0541	2.2478	5.4444	1.803

Among the total sample, most of the individuals had variable and uncertain responses. People shared favorable responses (Mean value = 5.5 to 7.0) towards five items - 4, 12,13,18,19. Intermediate responses towards research attitude (Mean value = 3.0 to 5.5 ) was observed in other items - 1,2,3,5,6,7,8,9,10,11,,14,15,16,17,20,, 21,22,23,24,25,26,27,28,29,30. Unfavorable response (1.0 - 3.0) towards research is not found in any individual.

## DISCUSSION

Research is an important activity in the student life which influences the academic and professional activities and students' prior statistical skills influence success<sup>3</sup>. The difficulties in research may even be reflected in students' views on their future work and in their choice of job.<sup>4</sup> For a successful career, students must be provided with opportunities to develop deep understanding of concepts, develop reasoning skills and become familiar with verbalizing and writing about statistics.<sup>5</sup> Students expressed diversified views on research and there is a need for proper education and training on research which helps the individuals to have positive attitude towards research.<sup>6</sup> Encouraging medical students to undertake research projects is certainly one of the ways of emphasizing active learning.<sup>7</sup> In the current study we focus on the students' attitude towards research. The present study advances the previous studies in assessing the research attitude amongst medical students. Results of this study show that attitude towards research is variable with different responses. In this study females were more in number than males, which is in accordance with the previous studies<sup>8</sup>. This can be explained by the current trend of females opting for medical profession more frequently than males. Most of the students are Hindu in religion with a majority belonging to middle socio economic status, which reflects the epidemiological status of the area. Most of the individuals strongly agreed to the response "Research is useful to my career" (Mean  $\pm$  SD = 6.12  $\pm$  1.46 ) which is in accordance with the previous literature. Research is the process of steps used to collect

and analyze information to increase our understanding of a topic or issue. Research plays an important role in everyday life as it helps in solving day to day problems.<sup>9,10</sup> In the current study individuals are least agreeing to the response "I use research in my daily life" which shows the negative attitude of house surgeons towards impact of research on day to day life. Previous studies on research attitudes show that undergraduate students usually tend to view research as difficult and stressful and some even develop phobia towards research<sup>11</sup>. Undergraduate science students are reluctant to learn research methods and statistics. Studies show that this reluctance can be in the form of anxiety about mathematics and statistics, something the vast majority of science students had left behind when they finished their secondary school mathematics<sup>12</sup>. It was also found that female students are less concerned about the difficulties of research than their male counterparts.<sup>13</sup> In the current study we found that individuals have intermediate response towards research anxiety and females are more anxious than males. Hence there is a need for proper training towards research to reduce anxiety, as anxiety and negative attitudes may serve as obstacles to learning, influence the amount of effort students are willing to put into learning a specific subject like research, or even influence their performance in a module<sup>14</sup> Gender plays a significant role in attitude towards research and gender is a significant factor in the disposition of research attitude among university level students. Male and female house surgeons have different attitude towards research.<sup>15</sup> Graduating students whether male and female from the

Faculties of Education, Arts and Social Sciences had negative attitude towards research<sup>[16]</sup>. The findings of the current study shows that girls like research more than boys and at the same time girls are more anxious towards the research (males: 3.1081±2.633 Vs females : 5.0317±2.2502). Girls are more favorable than boys towards the item "25. I will employ research approaches in my profession." (Males: 3.8108 ±2.1192 Vs females :5.0159±2.106) Among males most of the individuals agree with the response "Most students benefit from research."(5.756±1.862) and many of the male individuals are least agreeing that "Research makes me anxious (3.1081±2.633)". They are accepting that Research is connected to field of the study and Research is useful to career. Among the females, most accept that "Research should be taught to all students" (5.512 ±2.1013), "Research is interesting". (5.9206±1.8255m), "I like research." (5.6032 ±2.1963), "Research is useful for my career" (6.2629 ± 1.6545), "I love research" (5.512±2.0389), "Research is connected to my field of study".(6.0159±1.6411), "Most students benefit from research". (5.5714±1.6821) "Research is very valuable".( 5.5714±1.6821), "The skills I have acquired in research will be helpful to me in the future" (5.8254±1.8187) and "Research is useful to every professional". (5.9841±1.6896)

## CONCLUSION

Attitude towards research among medical interns is variable and females have more favorable responses than males in our sample. More research oriented programs at the undergraduate level and inclusion of research in undergraduate medical curriculum is required. This will create a more favorable attitude towards research and help students in their careers. The development of strong research skills and provision of medical care are inextricably linked. Research not only facilitates a medical student to get engaged in profound learning, but also helps in addressing problems in patient care and for developing tools and instruments for improvement of health care.

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