

**EFFECT OF ACADEMIC STREAM AND GENDER ON
ATTITUDE OF RESEARCH SCHOLARS TOWARDS
RESEARCH**

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ABSTRACT

In modern world, attitude of people are considered more important than their experiences and academic preparation. A positive attitude towards research is a key to success and progress in the knowledge based societies. The present study explored research scholars' attitude towards research in relation to their academic stream and gender. The sample consisted of 97 research scholars from M.D.University, Rohtak. Attitude Scale towards Research (ASTR-SVSY) by Sood and Sharma (2012) was used to assess the attitude scores of research scholars towards research. The scale consisted of 42 items distributed in the form of four dimensions: general aspects of research and research process, research usefulness in professional career, relevance in personal social life and research anxiety. The data was analyzed using descriptive statistics like Mean, S.D., Skewness, Kurtosis and inferential statistics like t-test. The results showed that research scholars have a favourable attitude towards research. Significant difference was found between the attitude of arts and science research scholars towards general aspects of research and research process, usefulness of research in professional career and relevance of research in personal and social life. No significant difference was found in attitude of arts and science research scholars towards difficulties in research and research anxiety. On the other hand, significant difference was found in attitude of male and female research scholars towards usefulness of research in professional career and relevance of research in personal and social life. No significant difference was found in their attitude towards general aspects of research and research process along with difficulties in research and research anxiety.

KEY WORDS: Academic Stream, Attitude towards Research, Gender, Research Scholars.

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INTRODUCTION

Education is considered as an important factor for the development of individual. It is through education that man develops his thinking, reasoning, problem solving, values etc. It is concerned with ever growing man as well as with the nation. Education should not be limited to teaching subjects but it must be equipped with knowledge and skills, as the function of education is not only to provide schooling in terms of the school curriculum but also to bring behavioural modification. Education itself, directly or indirectly; depends upon various factors for its development. Research has been found a potent weapon which plays important role in the development of education. It is a systematic effort to gain new knowledge and plays a significant role in our daily life also. Inventions in all fields have been possible only with the help of research. It is not a haphazard task but it requires proceedings in a definite direction, done with definite intention of taking a specific problem and of finding its solution in a scientific manner. It is a systematic process of collecting and analyzing information to increase understanding about the phenomenon under study. In the fast moving world research has become important intellectual equipment for the human beings to change their life style according to the needs and necessities of the society. Research opens new frontiers in all the fields like medicine, agriculture, space, business, and also in education. For this it is necessary to have a positive attitude towards it. Virtually any response of an individual toward an object when it is reliably associated with the respondent's tendency to evaluate the object is called attitude. In fact the term attitude refers to a hypothetical construct namely a predisposition to evaluate some objects in a favorable or unfavorable manner. This predisposition cannot be directly observed, but it can be inferred from individuals' responses to the object, which can run from overt behavior such as approaching or avoiding the object. Research attitude shows how one mentally approaches research including all the work related to that research. Attitude towards research means attitude towards various aspects of research (Sood and Sharma, 2012) [12]. Positive attitude towards research is a key to success and progress in the knowledge based societies. Positive attitude towards research is a key to success and progress in the knowledge based societies. Various four aspects or dimensions for attitude towards research are:

- **Attitude towards general aspects of research and research process** is related with attitude towards concept of research, research process, current scenario of research works, role of

supervisor in research works, the relationship between research student and supervisor, publication of research findings etc.

- **Attitude towards usefulness of research in professional career** comprises of the statements concerning respondents' predispositions or feelings with regard to significance and usefulness of research and research findings in their professional life and career.
- **Attitude towards relevance of research in personal and social life** is related to students' and teachers' notions or ideas about relevance of research and research related activities in their personal and social life. This dimension deals with application of research methods/processes and findings to solve daily problems in one's personal-social life.
- **Attitude towards difficulties in research and research anxiety** reflects the respondents' dispositions at the time of planning and conducting research activities. It is related with the feeling of anxiety, tension or easiness as well as difficulties faced during different sort of theoretical and practical research-related activities.

The enhancement of positive attitudes toward various components of research is one of the key components that impacts students' research output. For this reason, Siemens, Punnen, Wong and Kanji (2010) [10] conducted a study on the medical students to explore their attitudes towards the research and found that though the majority of the students felt that the research would be beneficial in their career, yet fewer than half of the students were significantly involved in any research activity during their medical school. Students who realize the need of spending more time on research activities are even fewer. About one fourth of the student reported no interest in any such activity. Zan and Martino (2007) [14] found that the performance of postgraduate students towards the research was better compared to the undergraduate students. On the other hand postgraduate students may take research course more positively and seriously because they may think that it would help them in their professional life (Papanastasiou, 2005) [7]. Butt and Shams (2013) [1] found that students enrolled in self-support evening programs have significantly better attitude towards the research than those enrolled in morning programs. The reason might be that evening students come to this field with more enthusiasm. Similarly, the prospective students with pre-medical background were found to have significantly better attitude towards the research than those who have arts and computer science as their previously studied subjects at higher secondary level. Iqbal (2010) [5] conducted a research to explore the research attitude of prospective teachers in different degree programs of teacher education like

science education, business education, Islamic education, child education, etc. He found significant differences in research attitude of prospective teachers from different teacher education degree programs. He further highlighted that there is urgent need of conducting research in this area.

There is scarcely any other research which has explored research scholars' attitude towards research. So, this study is aimed at exploring and comparing research scholars' attitude towards research on the basis of academic stream and gender. Investigating their attitude toward research will be a great stride for future educational development.

VARIABLES USED

In the present study, various dimensions of attitude towards research i.e. (1) Attitude towards general aspects of research and research process, (2) Attitude towards usefulness of research in professional career, (3) Attitude towards relevance of research in personal and social life, and (4) Attitude towards difficulties in research and research anxiety were taken as the dependent variables, whereas gender and academic stream constituted the independent variables.

OBJECTIVES OF THE STUDY

- 1) To study the nature of distribution of attitude of research scholars towards research.
- 2) To compare the attitude of research scholars towards various dimensions of research in relation to their academic stream.
- 3) To compare the attitude of research scholars towards various dimensions of research in relation to their gender.

OPERATIONAL DEFINITIONS OF KEY WORDS

- **Attitude towards research:** Attitude towards research means an aggregated measure of liking or disliking, personal dispositions, pre-conceived notions, feelings, ideas or inclinations towards different aspects of research. It is a tendency to engage in or avoid activities related to research. Attitude towards research means attitude towards various aspects of research (Sood and Sharma, 2012) [12].
- **Academic Stream:** In the present study, academic stream refers to the group from which research scholar belongs i.e. arts or science.
- **Gender:** The word gender is commonly used for different sexes such as male and female, boys and girls etc. In the present paper, it refers to the male and female research scholars.

RESEARCH DESIGN

Method

In the present study, descriptive survey method was used to study the attitude of research scholar towards various dimensions of research in relation to their academic stream and gender.

Sample

Random sampling technique was used to select a sample of 97 research scholars from M. D. University, Rohtak. They were classified on the basis of academic stream (i.e. Arts and Science) and Gender (Male and Female).

Tool Used

Attitude Scale towards Research (ASTR-SVSY) by Sood and Sharma (2012) [12] was used to assess the attitude of research scholars towards research. The scale measured the attitude of scholars towards research on four dimensions i.e. Attitude towards General Aspects of Research and Research Process, Attitude towards Usefulness of Research in Professional career, Attitude towards Relevance of Research in Personal and Social Life and Attitude towards Difficulties in Research and Research Anxiety. The score on the scale can range from 42 to 210. The higher total score on the scale will reflect positive attitude and vice-versa. Neutral score for concluding whether the attitude towards various dimensions of research is favourable or unfavourable is 45, 24, 24 and 33 (Total no. of statements for particular dimension x Score of undecided) respectively.

Statistical Techniques Used

To arrive at certain conclusion, the following statistical techniques have been employed, according to the design of the study.

- **Descriptive Statistics:** In order to describe the characteristics of the sample various statistical techniques like Means and S.Ds, Skewness and Kurtosis were used.
- **Inferential Statistics:** In order to draw inference t-test was used.

DATA ANALYSIS AND DISCUSSION

Nature of the Distribution of the Attitude of Research Scholars towards Research

The total score of research scholars on forty two statements related to the attitude towards research was calculated. The nature of distribution of the attitude scores towards research was studied in terms of mean, standard deviation, skewness and kurtosis.

Table: 1

Mean, Standard Deviation, Skewness and Kurtosis of Attitude of Research Scholars towards Research

N	Mean	Median	Mode	SD	Skewness	Kurtosis
97	166.50	167	167	27.24	-1.45	1.65

Table 1 indicates the overall attitude of research scholars towards research. The measures of the central tendency – mean, median and mode of the distribution are 166.50, 167 and 167 respectively. This implies that this construct attitude is normally distributed, as all three values are equal. In order to understand better the distribution of attitude towards research for the sample, skewness and kurtosis were also computed. The value for skewness is -1.45 which shows that the distribution of attitude towards research is negatively skewed. It can be interpreted that means attitude scores are massed at the high end of the scale (the right end) and are spread out more gradually towards the lower end (or left). The value for Kurtosis is 1.65 which is less than the standard value 0.263 of normal distribution curve. This means that the distribution is platykurtic i.e. there is lower concentration of values around the mode and thinner tails as compared to a normal distribution.

Attitude of Research Scholars towards various dimensions of Research in relation to their Academic Stream

The objective of the present study was to compare the attitude of research scholars towards various dimensions of research in relation to their academic stream. To achieve the objective of the study, the data were subjected to t-values for the mean scores of various dimensions of attitude towards research with respect to academic stream as shown in the following table. These mean scores have also been presented graphically in the fig.1 given below.

Table: 2

‘t’ values for Attitude of Research Scholars towards various dimensions of Research in relation to their Academic Stream

Sr. No.	Dimensions of Attitude towards Research	Group	N	Means	SD's	t-values
1.	Attitude towards General Aspects of Research and Research Process	Arts	49	52.47	11.43	3.66**
		Science	48	60.19	9.3	
2.	Attitude towards Usefulness of Research in Professional career	Arts	49	31.06	6.64	2.96**
		Science	48	34.44	4.48	
3.	Attitude towards Relevance of Research in Personal and Social Life	Arts	49	30.92	6.84	3.25**
		Science	48	34.56	4.94	
4.	Attitude towards Difficulties in Research and Research Anxiety	Arts	49	43.59	9.49	1.65(NS)
		Science	48	46.22	5.71	

** Significant at 0.01 level. * Significant at 0.05 level. NS = Not Significant

Table 2 reveals that the t-value (3.66) for the mean scores of attitude towards general aspects of research and research process of arts and science research scholars is significant at 0.01 level. Though it was found that both arts and science research scholars have positive attitude towards research and research process yet mean score of science research scholars (60.19) is greater than that of the mean score of arts research scholars (52.47). It indicates that science research scholars have more positive attitude towards general aspects of research and research process than their counterparts. The present result is supported by the result of Murolo, Kalso and Rosenberg, (2007) [6] who also found that the respondents, who had studied pre-medical subject at

intermediate level, had higher attitudes towards research as compared to the respondents with social sciences and humanities, and computer sciences backgrounds.

It can further be revealed from the table 2 that significant difference exists between science and arts research scholars regarding their attitude towards usefulness of research in professional career and relevance of research in personal and social life. In the context of mean scores, it was found that mean attitude scores of science research scholars towards usefulness of research in professional career and relevance of research in personal and social life (34.44 and 34.56) are greater than arts research (31.06 and 30.92) respectively. It can be due to the fact that the participation of science students in experimental activities at their earlier level of education (i.e. school level, college level and university level) helps them in understanding general aspects of research and research process; and hence results in developing more favourable attitude towards research and its usefulness in life.

It can further be inferred from the table 2 that t-value (1.65) for the mean scores of attitude towards difficulties in research and research anxiety is not significant at 0.05 level. However, in the context of the mean scores it can be inferred that science research scholars are found to have more attitude score towards difficulties in research and research anxiety (46.22) than the mean attitude score (43.59) of their counterparts. This difference (not significant) can be due to the fact that science students remain busy in their laboratory work under the guidance of their supervisor and got all opportunities to solve their queries immediately, if any. Immediate solution of the problem may result in developing positive attitude towards difficulties in research and reducing their research anxiety. Sabzwari, Kauser and Khuwaja, (2009) [9] also found that the majority of junior faculty in the medical profession in Pakistan perceive research as a difficult endeavor but have positive attitude towards the research.

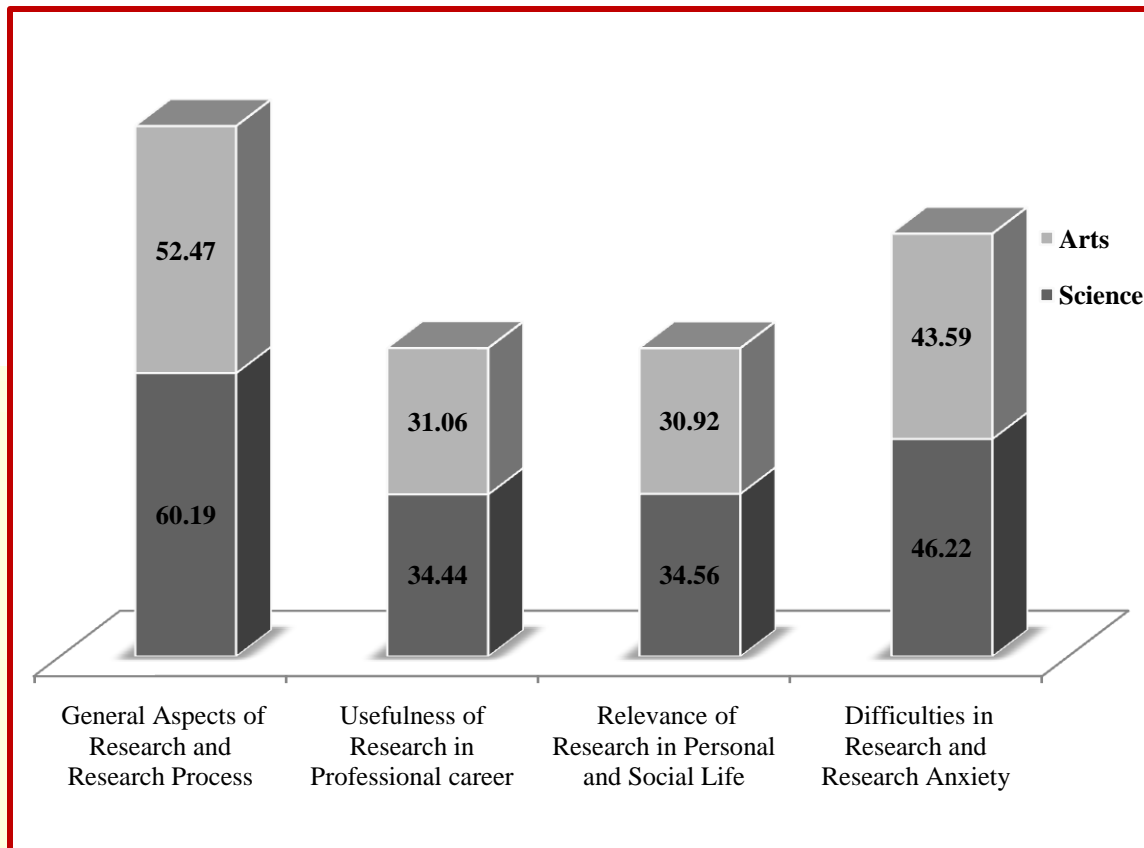


Fig.1: Academic Stream wise Mean Attitude Scores of Research Scholars towards research

Attitude of Research Scholars towards Research in relation to their Gender

The objective of the present study was to compare the attitude of research scholars towards various dimensions of research in relation to their gender. To achieve the objective of the study, the data were subjected to t-values for the mean scores of various dimensions of attitude towards research with respect to gender as shown in the following table. These mean scores have also been presented graphically in the fig.2 given below.

Table: 3

‘t’ values for attitude of research scholars towards various dimensions of research in relation to their Gender

Sr. No.	Various Dimensions Attitude towards Research	Group	N	Means	SD's	t-values
1.	Attitude towards General Aspects of Research and Research Process	Male	51	58.39	10.26	1.98(NS)
		Female	46	53.96	11.59	
2.	Attitude towards Usefulness of Research in Professional career	Male	51	34.08	5.16	2.41*
		Female	46	31.24	6.34	
3.	Attitude towards Relevance of Research in Personal and Social Life	Male	51	34.25	5.5	2.60*
		Female	46	31.02	6.59	
4.	Attitude towards Difficulties in Research and Research Anxiety	Male	51	45.82	6.71	1.2(NS)
		Female	46	43.87	9.03	

** Significant at 0.01 level. * Significant at 0.05 level. NS = Not Significant

Table 3 reveals that the t-value (1.98) for the mean scores of attitude towards general aspects of research and research process is not significant at 0.05 level. However, in the context of the mean score it was found that mean attitude score of male research scholars (58.39) is greater than mean attitude score (53.96) of female research scholars. It indicates that male research scholars have more positive attitude towards general aspects of research and research process than their counterparts. It was further revealed from the table 3 that significant difference exists between male and female research scholars regarding their attitude towards usefulness of research in professional career and relevance of research in personal and social life. It was found that mean attitude

scores of male research scholars towards usefulness of research in professional career (34.08) and relevance of research in personal and social life (31.24) are greater than female research scholars (34.25 and 31.02) respectively. These findings of the present study are consistent with the findings of Costello (1991) [3] and Williams and Coles (2003) [13] who also found that males had significantly better attitude towards the research than the females.

It can further be inferred from the table 3 that t-value (1.2) for the mean scores of attitude towards difficulties in research and research anxiety of male and female research scholars is not significant at .05 level. However, the mean score of attitude towards difficulties in research and research anxiety (45.82) of male research scholars are found to be greater than that of mean score of female research scholars (43.87). This difference may be due to the reason that males are thought to be bolder to face difficulties than female.

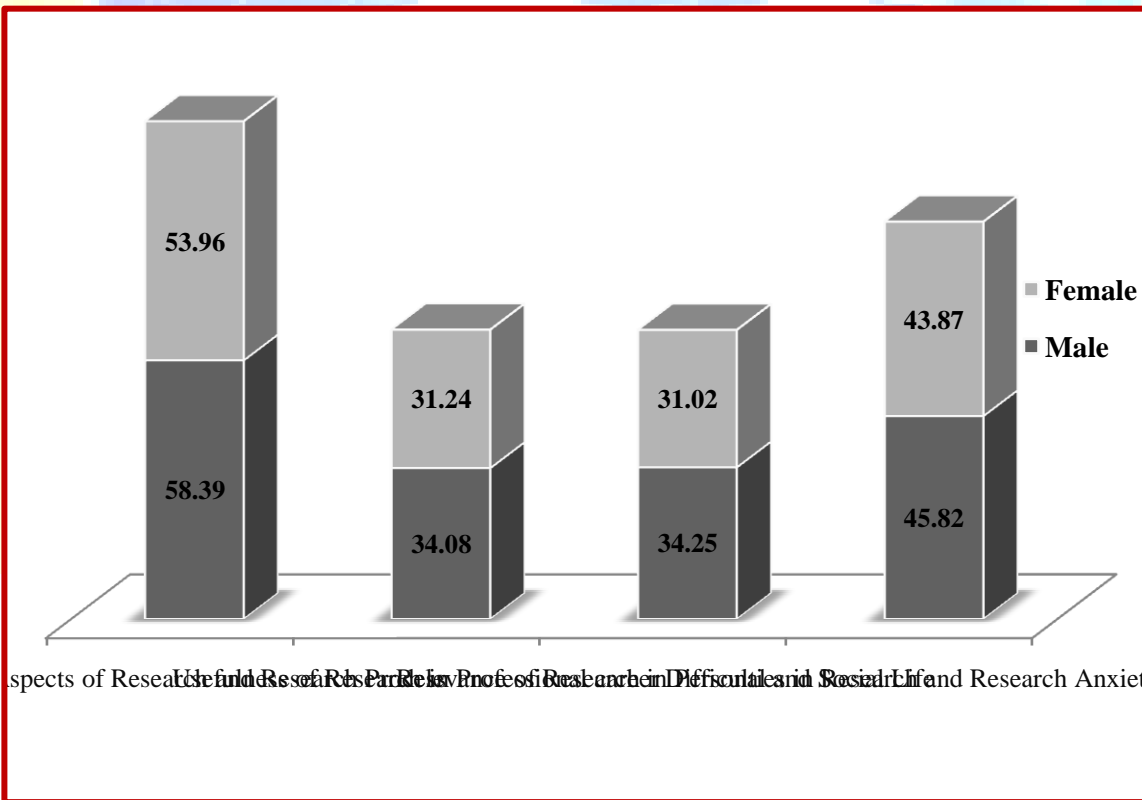


Fig.2: Gender wise Mean Attitude Scores of Research Scholars towards Research

FINDINGS

- It was found that the attitude of arts and science research scholars towards general aspects of research and research process, usefulness of research in professional career, relevance of research in personal and social life; differ significantly. No significant difference was found in attitude of arts and science research scholars regarding difficulties in research and research anxiety.
- No significant difference was found in attitude of male and female research scholar towards general aspects of research and research process; and difficulties in research and research anxiety. On the other hand, significant difference was found in their attitude towards usefulness of research in professional career and relevance of research in personal and social life.

EDUCATIONAL IMPLICATIONS

- The study was able to prove that research scholars have favourable attitude towards research. But they will be able of executing research in an effective manner if adequate support and research material will be provided to them.
- The result of present study indicated that male research scholars have significantly better attitude towards research. In order to improve the female research scholars' attitude towards research more workshops have to be conducted regarding research and care has to be taken that female teachers undergo these training programmes.
- Results indicated that science research scholars have significantly better attitude towards research than their counterparts. So arts students should be encouraged to take up statistically based research oriented subjects in secondary school. This would help in engraving a culture of research in arts students.
- Investigating research scholars' attitude toward research will be a great stride for educational policy makers for planning future educational development programmes.
- Teacher trainees must be equipped with effective strategies and pedagogies so that they may be able to develop positive attitudes toward the research among their students as it is importance for academic as well as professional success.

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