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**STUDY OF GENDER AND DISCIPLINE BASED DIFFERENCES ON ATTITUDE TOWARDS
RESEARCH**

ABSTRACT

The major purposes of this study were to find out the attitude of students towards research and to compare them on gender and discipline basis. The survey and correlation research designs were used. The population of research was all the students of University of Malakand. Six departments were selected from three strata's i.e. Social sciences, Arts and Pure sciences: Education, Social work, English, Islamic studies, Biotechnology and Zoology, respectively. One hundred and fifty male and female students were selected randomly for data collection. After validation of the questionnaire cronbach's alpha was found out, this was (.867). The questionnaire contained 32 items about Students Attitudes toward Research (SATR). SPSS was used for data analysis. The tests applied for data analysis were independent sample t-test, one way ANOVA and Pearson r. Study's results showed that the attitude of most of the students were (72.6%) positive. There were no significant differences between attitudes of students towards research on gender basis. The attitude of pure sciences students and social sciences were significantly more positive than arts students. It is concluded that attitude towards research of most of the students of University of Malakand was positive and a significant weak correlation (.31) was found between academic achievements and students' attitude towards research. It is recommended that the research workshops, seminars and conferences should be arranged to encourage and inspire students for genuine research projects.

Key words: Attitude towards research, pure sciences, social sciences and arts.

Introduction

A systematic and formal process to collect and analyze data for developing understanding about some phenomenon is called research (Swindoll, 2012).

The investigation of old and new concepts and to reveal information and knowledge. This knowledge and information is collected through applying suitable research methodologies without any bias is called research (Aqil, & Upadhyay, 2017).

As it is the age of globalization so the research plays significant role in helping several disciplines like commerce, education, industry, trade, technology, science and economics (Hussain, Akhter, Abid, & Sabir, 2016). In this way, the research is unavoidable and vital part in the life of academicians. We get help directly or indirectly in our lives from research. And that's why governments and other funding agencies spend huge amounts on research. Currently students are enrolling in PhD in high numbers due to the importance of vital role played by research in national development (Muthuswamy, Vanitha, Suganthan, & Ramesh, 2017).

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According to Zan and Martino (2007) the positive or negative evaluation about something is called attitude. Similarly, the feelings and behavior of a person is called attitude towards research. Attitude lies behind research therefore; the attitude is the primary aspect. This attitude also depends upon the quality of relationship between the supervisor and student. Therefore, for accomplishing research attitude is the prime factor (Muthuswamy, Vanitha, Suganthan, & Ramesh, 2017). Researchers Swindoll (2012) and Abraham (2003) assert that in completion of any academic work research plays an important role. The learning of students is facilitated through facilitating their research related attitude (Papanastasiou, 2005).

Papanastasiou (2005) assert that students' research related attitude at under graduate level is almost negative. Wanstock (1994) claim that at undergraduate level the students were almost reluctant in taking research classes. Adams and Holcomb (1986) assert that the undergraduate level students usually see the articles and citations about research negatively. Adams, & Holcomb (1986) assert that lot of studies found research with negative aspects. The students consider research as tough and hard work. The students are unaware of different concepts and importance of research in day to day life

In a study conducted on medical students the attitude towards research had not significant differences. They asserted that despite low facilities the attitude of most of the students was positive towards research (Siamian, Mahmoudi, Habibi, Latifi and Gavani, 2016).

Siemens, Punnen, Wong and Kang (2010) assert that the students of medical sciences thought research would be beneficial in their daily lives and about 50% students were involved in some research activity while one fourth of them did not take any interest in any research activity. Ghafournia, Motamedi, and Yousefian (2006) claimed that in a research study a high majority of students were of the view that research was beneficial in their daily life. while a very small percentage considered it as useless. In another study conducted by Javadian (2002) on 200 medical students, 33% students presented their papers related to their thesis work while almost half of them considered it as only a formality for completing degree. Meraj, Gul, Akhter, Iram and Khan (2013) asserted in a study on medical science students' attitude and perception about research and claimed that most of the students think research useful in their lives but considered it as difficult and complex.

Some other researchers found in their study that the attitude of prospective students was negative however it was more positive for self-financed students as they felt enthusiasm (Butt and Shams, 2013). According to the research conducted by Davari, kanzemi, Aghili and Mozafari (2015) conducted a research on self-efficacy and research and found significant positive relationship between self-efficacy and research. No significant difference was found on the basis of gender. However Shaukat and Saddiquah (2014) found that on postgraduate students the attitude of female was significantly lower than female students. Similarly, the score of attitude towards research had strong positive correlation with achievement in research.

English as a second language and foreign language students were unaware of the basic skills of research and therefore had poor attitudes towards research (Patak, & Naim, 2012).

Academic achievement and attitudes are strongly correlated (Reynold, & Walberg, 1992). Their negative attitude put negative effects on the performance of the students and achievement (Elmore, & Lewis, 1991, Zaidner, 1991). Similarly other studies also suggest that for better achievements strong attitudes towards that subject is important (German, 1988). While other researches are of the view that it is not necessary that strong attitude towards a subject had high score in that subject (Hung, 2005). Some other studies suggest that there is weak relationship between research related attitude and academic achievement in that subject (Shkedi, 1998).

Shirbagi (2011) in a research found about post graduate students and concluded that the attitude towards research of male students were significantly higher than female students. He further asserted that the attitude of engineering students was higher than the attitude of arts students. Arts students showed greater anxiety towards research than engineering students. The more skills of self-efficacy were shown by male students than female students. The self-efficacy skills of Humanities students were lower than technical or engineering students. Similarly, Rubin and Babbie (2011) found poor attitude towards research among social work students,

Mohammadi and Zarifian (2009) assert in their study and they found that between influencing factors of research i.e. the use of information resources, the tendency of students to study, attitude of faculty members towards research, access to appropriate facilities of research, academic performance, discipline, attitude, family and curiosity, there

were significant correlations existed. However, the feelings and attitude towards completion of their research work was negative (Early, 2014). The negative attitude and feeling badly affect their performance in research (Early, 2014; Papanastasiou and Zemblas, 2008; Schulze, 2010; Walker, 2010).

Early (2014) asserted that the reasons for negative attitude and feelings about research were not clear however, the students felt nervousness in data analysis or statistics.

So therefore the researchers became motivated to conduct this study on students research related attitude at university of Malakand because the context of this university is different from other universities in Pakistan. In this study the researcher found out research related attitudes of university students and compare it on the basis of gender and discipline.

Statement of the problem

Important aspect of education is attitude in general and specific in research. The set of beliefs which a person or someone has is called attitude (Brown, 2007). Mahmud (2009) assert that attitudes are supposed to influence performance. In this study the researchers focused on exploring and comparing the research related attitude among university students on the basis of discipline and gender.

Objectives of the research study

The research study's objectives were to:

- Explore the level of students research related attitude.
- Compare the research related attitude of students on gender basis.
- Explore the research related attitudes of students on discipline basis.
- Find out the correlation between research related attitudes of students and their academic achievement.

Hypotheses of the study

The following hypotheses were tested:

H1: The research related attitude of students is negative.

H0 2: There is no significant difference between the research related attitudes of students on gender basis.

H0 3: There is no significant difference between the research related attitudes of students on the basis of discipline.

H0 4: There is no significant correlation between the research related attitudes of students and their achievement.

Significance of the study

The present study is important in many ways: firstly, it helps the teachers to find out the attitude of the students toward research and to develop it positively, secondly it help the policy makers to design an effective policy for the students' researchers. It also helps the other students for future studies. It also contributes to the curriculum developers.

This research study may increase the importance of research which would be useful in the development of their profession. It would be valuable for teacher to deliver further facilitate students to develop and increase their achievement. This study would be helpful for those teachers who teach research methodology course to students. Students' attitude towards research is significant element of university students. The key argument to describe this study is that it encourages the experts in curriculum to emphasis the content more students centered (Hussain, Akhter, Abid, & Sabir, 2016). In earlier or starting age the student involvement in research is strongly connected with the initiative of students' research at postgraduate level (Harsh Kumar, Jayaram, & Kumar, 2009; Reinders, Kropmansm & Med Edu, 2005).

Delimitations of the study

Taking into consideration the resources and time available with the researcher, the study has been limited to the following aspects.

The sample consisted of:

- a) The students of university of Malakand.
- b) The students of pure sciences, social sciences and arts.
- c) The 150 students from different departments' i.e. social science (Education and Social work), Arts (English and Islamic studies) and pure science (zoology and Biotechnology).

Positive attitude towards research

Students who score was above the median or at the median on Attitude Towards Research Scale (ATRS) was taken as positive attitude towards research.

Negative attitude towards research

Student who score was below the median on Attitude Towards Research Scale (ATRS) was taken as negative attitude towards research.

METHODOLOGY

Design of the research

The research design was quantitative in nature which was survey and correlation.

Research Population

The population of the study constituted all the students studying at University of Malakand

Sample and Sampling

Out of above mentioned population 150 male and female students from three strata (arts, pure sciences and social sciences) were randomly selected through stratified random sampling technique.

Table1

Number of students from three strata

No: of strata	Social Sciences	Arts	Pure Sciences
No: of Male Subjects	32	26	29
No: of Female Subjects	19	24	20

Data was collected from three strata's i.e. arts, pure sciences and social sciences. Two departments were selected from each stratum. From Arts, English and Islamic studies were selected. Education and social work were selected from Social sciences stratum and Biotechnology and zoology were selected from pure sciences. In every department only 8th semester were selected. In every semester forty students are usually enrolled in each department.

Research Instrument

Questionnaires were used as a research instrument. The students’ attitude towards research were analyzed through questionnaire. A self-developed questionnaire was used for collection of data. This instrument was constructed on five-point Likert scale ranging from Strongly Disagree (SDA) to Strongly Agree (SA) to.

Items in questionnaire were objective types, the nature of the questionnaire was objective, because it is easy to fill them out and took less time and is easy for analyzing.

Pilot Testing, Validity and Reliability of the scale

The questionnaire contained 33 items which were given to Professor Dr. Rauf for Validation purpose and one item was deleted after pilot testing. For reliability purpose cronbach’s alpha was find out which was (0.867). This cronbach’s alpha was high which meant that scale was satisfactory.

Data Collection

The questionnaires were administered to the respective respondents. The researchers personally visited each department for this purpose. The researchers requested to the department head to allow students to fill questionnaire. The researchers distributed, explained the questionnaire to the students and were directed them to fill the questionnaire. Students filled questionnaire on the spot. There was hundred percent response rate.

Analysis of data

Data were collected through questionnaires and were analyzed by using the statistical package SPSS version 16 for Windows. For comparison of attitude towards research between male and female independent sample t-test were used while for comparison of attitude towards research based on discipline one way ANOVA were used. While Pearson r was used to identify correlation.

Table2

Students having positive and negative research related attitudes

H 1: The research related attitude of students is negative.

Research related attitude of students

Title	No of students	% age
Students having positive attitude towards research	109	72.66
Students having negative attitude towards research	41	27.3
Total	150	100

The above table clarifies that 109 students have positive research related attitudes which means that 72.66% students liked research and considered that research is important for their life. The above table also shows that the attitudes of 41 students were negative towards research which means that 27.33% students dislike research and did not considered it good for their life. So the directional hypothesis was rejected and most of the students have positive research related attitude.

H0 2: There is no significance difference between research related attitude on the basis of gender.

Table 3

Comparison of attitude towards research on gender basis

	Gender	N	Mean	SD	Df	T	Mean Difference	Sig.
Attitude towards research	Male	87	147.36	31.437	148	.789	3.944	.431
	Female	63	143.41	28.394				

Not Significant at $\alpha = .05$

The above table shows that $p > 0.05$ with mean value (147.36) of attitude towards research for male and female was (143.41) and t-value 0.789 so the null hypothesis was accepted and on gender basis, there is no significant difference found between male and female students. So the attitude towards research of male and female were same.

H0 3: There is no significant difference among the research related attitude on the basis of discipline.

Table 4

Students' attitude towards research on the basis of discipline

ANOVA

Summation	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	8119.367	2	4059.684	4.683	.011
Within Groups	127426.133	147	866.844		
Total	135545.500	149			

There is a significant difference of attitude toward research between the groups with respect to discipline at significance level ($.011 < .05$) as the mean square between the groups is 4059.68 with degree of freedom 2. So the Ho3 was rejected and there is significant difference found between the attitudes of students towards research on discipline basis.

Table 5

(Post Hoc Tests) *Comparison of students research related attitudes on the basis of discipline*

Summation		Tukey HSD		
(I) Department	(J) Department	Mean Difference (I-J)	Std. Error	Sig.
Social sciences	Arts	-2.191	5.860	.926
	pure sciences	-16.654*	5.890	.015
Arts	Social sciences	2.191	5.860	.926
	pure sciences	-14.464*	5.918	.041
pure sciences	Social sciences	16.654*	5.890	.015
	Arts	14.464*	5.918	.041

*. The mean difference is significant at the 0.05 level.

The above table shows that ($.926 > 0.05$) there is no significant difference between social sciences and arts students attitude towards research. Further the table shows that there is significant difference between pure sciences and social sciences students' attitude towards research ($0.015 < 0.05$). Similarly, there is no significant difference

between arts with social sciences students attitude towards research= (.926>0.05). In addition to that there is significant difference found between arts and pure sciences students attitude towards research = (0.041<0.05). Similarly, there is significant difference (0.015<0.05) found between pure sciences with social sciences. The above table further shows that there is significant difference found between pure sciences and arts students attitude towards research= (0.041<0.05).

H0 4: There is no significant correlation between the attitude of students towards research and their academic achievement.

Table 6

Correlation between research related attitude of students and academic achievement

		Summation	Marks
Attitude towards research	Pearson Correlation	1	.311**
	Sig. (2-tailed)		.000
	N	150	150
Marks	Pearson Correlation	.311**	1
	Sig. (2-tailed)	.000	
	N	150	150

*. Correlation is significant at the 0.05 level (2-tailed).

The above table shows that there is significant weak correlation (.31) between students achievement and their research related attitude. It means that there is weak relationship between the attitude of students towards research and their academic achievement.

Conclusion

- 1) The research related attitude of most of the students was positive.
- 2) No significant difference was there between male and female students attitude towards research.
- 3) There was significant difference found between the attitudes of students towards research on discipline basis. The attitudes of students of pure sciences and social sciences were significantly higher than arts students.
- 4) There was significant weak correlation (.31) found between academic achievement and research related attitude.

Discussions

As the importance of research and its vital role in the development of country is crucial and clear, hence recognizing the hindrances and performance in research in order to improve the quality of research is of particular importance. An attitude towards research is concerned with effective feeling and response toward research. This study has successfully explored the student attitudes towards research among different discipline at BS level. It was concluded that 72.6% of the students have positive attitude toward research which showed that students have significant positive attitude toward research. This study has supported by Hussain, Ch, Akhter, Abid and Sabir (2016) which have found that students of technology education have positive attitude towards research in Pakistan. Manuel, Fenton and Philemon (2013) also found similar results that greater percentage of psychology than sociology had positive research related attitude as for as quantitative research methods are concerned. Oguan, bernal, and Pinca (2014) also claim that Overall students have positive attitude toward research. Meraj, Gul, Akhter, Iram and Khan asserts that 65.7% of the students considered useful for their professional carriers and relevant to their daily life. Siamian, Mamoudi, Habibi and Latifi (2016) also supported this study which has found that most of the students have positive research related attitudes while the study of Rubin and Babbie (2011) were in contrast to this study because they found the students of social work have negative research related attitudes. In another study student teachers have negative attitude towards research (Butt and Shams, 2013). Papanastasiou (2005) also asserts that the attitude of undergraduate students towards research was negative. Adams and Holocomb (1986) also

concluded that the students of undergraduate programs typically tend to view the articles related to research with negative aspect which is against to this research work.

Another finding of this study is that difference found was insignificant between male and female students attitude towards research while Shaukat and Saddiquah (2014) found that research related attitude of both gender were not the same i.e. they found that male had significantly higher research related attitude than female. But Hussain, Ch, Akhter, Abid and Sabir (2016) supported this research that there was insignificant difference found between male and female students attitude towards research whereas Wainstock (1994) also mentioned that there was insignificant difference found between attitude toward research of male and female students. also claim that on gender basis, there was insignificant difference found (Siamian, Mahmoudi, Habibi, Latifi and Gavvani ,2016).

Another finding of this study is that there is significant difference found at the attitude of students towards research between different groups on discipline basis at significance level ($0.011 < 0.05$). Butt and Shams (2013) also claims that with respect to the type of discipline/program a significant difference was found in the attitudes. Significant results were found between attitude of students towards research on the basis of different program of study (Shaukat, Siddiquah, Abiodullah, & Akbar, 2014).

Another finding of this study is that ($.926 > 0.05$) there is insignificant difference between social sciences and arts students attitude towards research. Further the findings of this research study showed that there is significant difference between social sciences and pure sciences students attitude towards research ($0.015 < 0.05$). In addition to that there is significant difference found between arts and pure sciences students attitude towards research= ($0.041 < 0.05$).

Another finding of this study is that there is significant weak correlation (.31) between academic achievement and research related attitude. The most important reason is that we cannot develop a desire for research in the student in earlier stage (Sabzwari, Kauser, & khuwaja, 2009). Taking into consideration all these barriers all the opportunities should be provided to bring active staff for research and all those undergraduates should be explored and collected who are enthusiastic to research and also provide funds for research (Siemens, Punnen, Wong, & Kanj, 2010).

Recommendations

A supportive undergraduate research environment is recommended (Mark, kelch, & Invest Med, 2001). Pan & Tang (2005) assert the interest of students in research can be increased by emphasizing/focusing on the importance of research, encouraging students and providing a friendly and supporting environment for research.

- Students should be informed from the importance of research by their teachers.
- The teachers should provide guidance and counseling services about research to them.
- Research seminars and conferences and workshops should be arranged by the authorities to the research students.
- It is important/necessary for the faculty officials to plan in more disciplined way for the development of students, knowledge, skills about research methodologies and other related information.

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