

## **Postgraduate Students' Attitudes towards Research**

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### **Abstract**

Students often rate courses in research methods negatively and regard them as difficult. This study used the Attitudes towards Research Scale (Papanastasiou, 2005) to assess the attitudes of 201 randomly selected postgraduate students of teacher education programs from public and private universities in Pakistan. It was hypothesized that students hold positive attitudes toward different aspects of research. This scale consisted of 32 items having 5 constructs: usefulness of research in a career, research anxiety, positive attitudes toward research, research relevance to life, and research difficulty. Data were collected by self-administered approach. Data were gathered from the trainee teachers during their class time. Three programs (B.S honors/ M.A education, (N = 63), M.Phil / MS education (N = 114), and PhD education (N = 24) were selected as a sample of the study. Data were analyzed by using t-test and ANOVA. Results indicated that the males had significantly positive attitudes towards research than the females. Similarly significant results were found on age, different programs of study, and university type.

**Keywords:** Attitudes, Research, Anxiety, Postgraduate Students

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## Introduction

Research plays a significant role in our daily life. All inventions have been possible with the help of research. With the help of research human being were able to find the cure for flue, polio and many other horrible diseases. Not only in medicine, had it also helped a lot in technology. Talking to long distance relatives is the outcome of research in technology (Gross, 2001). Research is the process of collecting and analyzing information to increase our understanding of the phenomenon under study (Swindoll, 2012). The aim of the research is to contribute towards the understanding of the phenomenon and then to communicate that understanding to others. It gives rewarding learning experiences for students, producing graduates capable of high personal and professional achievement (Fishbein & Ajzen, 1975).

Attitude is positive or negative affect towards a particular subject. Bi dimensional definition of attitude includes beliefs as well regarding subject. Comprehensive definition of attitude includes emotions, beliefs, behaviors and their interaction (Zan & Martino, 2007). The attitude towards research basically means a detailed study of thinking, feeling and the person's behavior towards research. According to Papanastasiou (2005), it is important to identify the attitudes towards research so that a positive attitude can be developed among students and hence their learning can be facilitated in turn.

A number of researches have been conducted to explore the attitude towards research and the results showed that attitudes towards research are generally not positive. Students think that it is tough and dry to study the research (Adams & Holcomb, 1986). They do not understand the concepts of research and its importance in their professional life. Patak and Naim (2012) found that the attitude of students of English as Second Language and English as Foreign Language towards visiting library was very poor. They lack basic research skills ranging from searching and evaluating literature sources to paraphrasing and giving citations. Siemens, Punnen, Wong, & Kanji (2010) 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, 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. Sabzwari, Kauserand Khuwaja, (2009) conducted a study on junior faculty in the medical profession in Pakistan and found that though the majority of them perceive research a difficult endeavor but they have positive attitude towards the research.

Shkedi, (1998) found that teachers are not much interested in reading research literature and the reasons behind are lack of time, lack of understanding, non availability of suitable literature, and lack of trust in research findings. Butt and Shams (2013) observed negative attitude towards the research among prospective teachers. However, Butt and Shams (2013) 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. The reason according to Butt and Shams (2013) might be that experimentation during their previous pre-medical study might have developed a positive attitude towards the research among prospective teachers.

Papanastasiou (2005) found negative attitude towards research among undergraduate students. Siemens, Punnen, Wong and Kanji (2010) found that involvement in research was significantly enhanced in the fourth year medical students compared to the second year medical students. (Zan & Martino, 2007) also found that the performance of postgraduate students towards the research was better compared to the undergraduate students. The reason may be that undergraduate students think research as a tough and difficult course and want to avoid this course. Conversely, it is possible that they assumed research in negative manner because they had to face several obstacles and could not understand the concepts of the research. 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).

### **Objective of the study**

The objective of the study was to assess the post graduate students' attitudes towards research in relation to gender, age, program of study, and type of university on five factors: research usefulness, research anxiety, positive attitudes, relevance to life, and difficulty of research.

### **Hypotheses**

Ho<sub>1</sub> There is no significant difference in the mean scores of male and female students' attitudes towards the research on five factors: research usefulness, research anxiety, positive attitudes, relevance to life, and difficulty of research.

- Ho<sub>2</sub> There is no significant difference in the mean scores of students of different age groups on attitudes towards the research on five factors: research usefulness, research anxiety, positive attitudes, relevance to life, and difficulty of research.
- Ho<sub>3</sub> There is no significant difference in the mean scores of students enrolled in different programs of study on attitudes towards the research on five factors: research usefulness, research anxiety, positive attitudes, relevance to life, and difficulty of research.
- Ho<sub>4</sub> There is no significant difference in the mean scores of students enrolled in public and private university on attitudes towards the research on five factors: research usefulness, research anxiety, positive attitudes, relevance to life, and difficulty of research.

## Method of Study

This part of paper describes the method of the study.

### Sample

About 201 students from different teacher education program responded to the questionnaire. A summary of the demographic information of participants is presented in Table 1.

Table 1: *Demographic information of respondents*

| Variables         |                       | N   | %    |
|-------------------|-----------------------|-----|------|
| Gender            | Male                  | 66  | 32.8 |
|                   | Female                | 135 | 67.2 |
| Age               | 20-30                 | 137 | 68.2 |
|                   | 31-40                 | 45  | 22.4 |
|                   | Above 40              | 19  | 9.5  |
| Program of study  | B.S honors/M.A        | 63  | 31.3 |
|                   | M.Phil/MS             | 114 | 56.7 |
|                   | PhD                   | 24  | 11.9 |
| University        | Public                | 177 | 88.1 |
|                   | Private               | 24  | 11.1 |
| Research Phase    | Studying a research   | 168 | 83.6 |
|                   | Conducting a research | 33  | 16.4 |
| Research priority | Very high             | 35  | 17.4 |
|                   | High                  | 68  | 33.8 |
|                   | Medium                | 15  | 7.5  |
|                   | Low                   | 64  | 31.8 |
|                   | Very low              | 19  | 9.5  |

## Instrument of Study

In the current study, attitude towards the research among teacher education students in Pakistan was determined using the Attitudes Toward Research (ATR) Scale (Papanastasiou, 2005). ATR questionnaire with 32 items comprising five factors on 7 point likertscale was used to collect data. 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. An example of each factor is as follows:

Research is usefulness of Research for career (factor 1)

Research makes nervous (factor 2)

Love for research (factor 3)

Use of research in my daily life (factor 4)

Arithmetic is troublesome (factor 5)

Reliability of the scale was 0.835 (Cronbach's alpha). Alpha coefficients for each factor were as follows: research usefulness for profession: 0.842, research anxiety: 0.600, positive attitude towards research: 0.870, research relevance to life: 0.377, and research difficulty: 0.549. One possible reason for low reliability of three factors (relevance to life, research difficulty and research anxiety) of ATR scale could be that each of these factors has less than five items. Another reason could be the contextual differences; students responded scale items according to their own understanding level.

To determine the research attitudes of post graduate students towards research, questionnaires were disseminated to the students of different teacher education programs of two public and two private universities. Prior to the distribution of questionnaires to the participants, they were given information about the nature of the study and their right to refuse to participate. They were guaranteed that their responses will be kept confidential. They were given instructions to complete the demographic section that included information about gender, age, qualification, and program of the study. Respondents were also instructed to respond each item as accurately as they can. Incomplete forms were discarded before data entry.

## Results

Descriptive and inferential statistics were used to analyze the data. All statements of factor 2 (1, 6, 7, 16, 18, 25, 28, & 32) and factor 5 (9, 10, & 11), and 2 statements of factor 4 (23 & 26) were recorded. Average means scores and average standard deviations of each factor were calculated. To determine the mean scores differences in the research attitudes of students having different demographic variables, t-test and one way analysis of variance (ANOVA) were applied.

Table 2: *t- test for comparison of Mean scores of Male and Female students' research attitude*

| Factors                   | Male<br>(n = 66) |      | Female<br>(n = 135) |      | <i>t</i> | <i>p</i> |
|---------------------------|------------------|------|---------------------|------|----------|----------|
|                           | M                | SD   | M                   | SD   |          |          |
| F1:Research usefulness    | 5.59             | 1.20 | 5.42                | 1.14 | .954     | 0.34     |
| F2: Research anxiety      | 3.58             | 1.06 | 3.40                | 1.49 | .875     | 0.38     |
| F3: Positive attitudes    | 5.34             | 1.18 | 4.99                | 1.38 | 1.762    | 0.08     |
| F4:Relevance to life      | 4.91             | 1.22 | 4.57                | 1.08 | 2.044    | 0.04*    |
| F5:Difficulty of research | 3.93             | 1.33 | 3.66                | 1.44 | 1.291    | 0.19     |

\* $p < .05$ ,

Table 2 shows that the mean scores of males were significantly better than that of the females on Factor 4 “Relevance to life”. Effect size of this difference was 0.30 which is low according to Cohen (1988).

Table 3: *One-way ANOVA for Research Attitude Measure Across four Age Groups*

| Factors                   | Age (years)        |      |                   |      |                 |      | ANOVA |      |
|---------------------------|--------------------|------|-------------------|------|-----------------|------|-------|------|
|                           | 20-30<br>(n = 137) |      | 30-40<br>(n = 45) |      | >40<br>(n = 19) |      |       |      |
|                           | M                  | SD   | M                 | SD   | M               | SD   | F     | p    |
| F1:Research usefulness    | 5.30               | 1.19 | 5.82              | 0.98 | 5.98            | 1.01 | 5.703 | <.01 |
| F2: Research anxiety      | 3.35               | 1.24 | 3.68              | 1.77 | 3.70            | 1.11 | 1.322 | .26  |
| F3:positive attitudes     | 4.87               | 1.36 | 5.54              | 1.17 | 5.73            | 1.02 | 7.013 | <.01 |
| F4:Relevance to life      | 4.59               | 1.11 | 4.80              | 1.12 | 5.07            | 1.29 | 1.770 | .17  |
| F5:Difficulty of Research | 3.70               | 1.46 | 3.81              | 1.27 | 3.93            | 1.39 | .293  | .74  |

Table 3 shows that the significant mean scores differences are in Factor 1 “research usefulness” and in Factor 3 “positive attitudes”. Post hoc test revealed that participants of age 30-40 and above 40 were significantly better than participants of age 20-30 on Factor 1 “research usefulness”(0.45 and 0.58 effect sizes respectively) and Factor 3 “positive attitudes” (medium effect sizes (Cohen, 1988)of 0.51 and 0.65 respectively). Hence, research attitude and perceived research usefulness for profession was significantly better in elder age groups of students (30-40, and above 40 years) compared to the younger age group.

Table 4: One-way ANOVA for research attitude Measure Across levels of study

| Factors                       | B.S(Hons)/<br>M.A<br>(n = 63) |      | M.Phil/<br>MS<br>(n = 114 ) |      | PhD<br>(n = 24) |      | ANOVA  |       |
|-------------------------------|-------------------------------|------|-----------------------------|------|-----------------|------|--------|-------|
|                               | M                             | SD   | M                           | SD   | M               | SD   | F      | p     |
| F1: Research usefulness       | 5.00                          | 1.11 | 5.63                        | 1.14 | 6.03            | 0.96 | 9.958  | <.01  |
| F2: Research anxiety          | 3.42                          | 1.26 | 3.40                        | 1.22 | 3.85            | 2.10 | 1.108  | 0.332 |
| F3:Positive attitudes         | 4.57                          | 1.37 | 5.23                        | 1.26 | 5.86            | 1.01 | 10.345 | <.01  |
| F4:Relevance to life          | 4.37                          | 1.08 | 4.82                        | 1.11 | 4.81            | 1.25 | 3.448  | <.05  |
| F5: Difficulty of<br>research | 3.60                          | 1.57 | 3.78                        | 1.37 | 3.94            | 1.11 | .601   | 0.54  |

Table 4 describes the results that significant mean scores differences were observed in Factor 1 “research usefulness”, Factor 3 “positive attitudes”, and in Factor 4 “relevance to life”. Post hoc test revealed that participants of M.Phil/MS and PhD were significantly better than participants of B.S honors/ M.A on Factor 1 “research usefulness”. Effect sizes of these differences were medium (0.56) and high (0.95) respectively (Cohen, 1988). Participants of M.Phil/MS held significantly more positive attitudes than the participants of B.S honors/ M.A.(medium effect size of 0.51) and attitude of PhD participants was significantly better than both M.Phil/MS and B.S honors/M.A students (medium effect size (Cohen, 1988) of 0.51) (Factor 3). Perceived relevance of the research to the life (Factor 4) was significantly better in participants of M.Phil./ MS compared to the participants of B.S honors/ M.A. Effect size of this difference was low (0.41).

Table 5: t-test for Research attitude Measure for participants of Public and Private Sector

| Factors                    | Public<br>(n = 177 ) |      | Private<br>(n = 24) |      | t      | p    |
|----------------------------|----------------------|------|---------------------|------|--------|------|
|                            | M                    | SD   | M                   | SD   |        |      |
| F1:Research usefulness     | 5.41                 | 1.18 | 5.96                | 0.86 | -2.788 | <.01 |
| F2: research anxiety       | 3.48                 | 1.42 | 3.34                | 0.92 | .467   | 0.64 |
| F3: positive attitudes     | 5.06                 | 1.36 | 5.43                | 1.05 | -1.594 | 0.12 |
| F4: relevance to life      | 4.63                 | 1.14 | 5.03                | 1.08 | -1.618 | 0.10 |
| F5: difficulty of research | 3.77                 | 1.40 | 3.57                | 1.50 | .655   | 0.51 |

Table 5 reflect that students from private sector perceived research usefulness (Factor 1) for their profession significantly better compare to the public sector. Effect size of this difference is small (0.48) (Cohen, 1988).

## Discussion

The study was carried out to determine the research attitudes of postgraduate students on five dimensions: research usefulness, research anxiety, positive attitudes, relevance to life, and difficulty of research. This study explored the effects of demographic variables on the students' attitudes towards the research. It was found that the male students perceived research relevance to the life significantly better compare to the female students. However, the effect size of this difference was low. Research is a substantial component of every profession. Business, management, accounting and other professions demand good skills of mathematics and research. These professions are usually male oriented and have more relevance to males as compare to the females. This research finding is consistent with Williams & Coles (2003) who found that males had significantly better attitude towards the research than the females. Similarly, Sabzwari, Kauser, & Khuwaja (2009) found that the involvement of male doctors in research was significantly higher than those of the female doctors. Significantly better attitude towards the research in the males in current study may be due to the reason that male students can realize the practicality of the research.

Another finding of this study is that the male students held positive attitude towards the research. Costello (1991) supported this research finding that the males held more positive attitudes towards research than the females as this is the male dominated domain. A possible reason for this finding may stem from the fact that the males assume that the research is useful for their professional career (Butt & Shams, 2013). Females are usually supposed to look after domestic responsibilities so they consider research subject as a degree requirement. Another reason of the positive attitudes of males towards the research may be that they are more inclined towards mathematics, statistics and economics than the females (Lindsay, Breen, & Jenkins, 2010).

In this study, the elder age group of students (30-40 and above 40) perceived research usefulness for profession significantly better than the younger age group students. They also held significantly better positive attitude towards the research than the younger age group students (20-30). Effect sizes were low and medium. In the study of Williams & Coles (2003), teachers of age group 20-30 years were founds to have significantly better attitude than the teachers with other age groups. Reason behind positive attitudes of 30<sup>+</sup> age group respondents could be that this is the crucial stage of their career and hence they give high priority to the research.



Results also showed that participants of higher degrees were significantly better than the participants of lower degrees on Factor 1 “research usefulness”, positive attitudes towards research (Factor 3) and perceived relevance of the research to the life (Factor 4). Effect sizes of these differences were ranging from low to high. Williams & Coles (2003) found that attitude towards the research varies significantly in relation to research experience. Teachers who are currently working on a research project or who conducted action research at some period of time had more positive attitude towards research. Moreover, they found that the teachers at senior management positions have significantly better attitude towards the research than the others. This might be linked with their decision making responsibilities where they have to take a wide perspective (Williams & Coles, 2003). Sabzwari, Kauser, & Khuwaja (2009) also found that doctors who were currently engaged in research have more positive attitude towards the research and perceived research as less difficult. They also found that those doctors who were receiving post graduate training or those who previously trained or engaged in research were significantly more involved in the research than the others.

Finally, it is worth mentioning to describe that the students enrolled in private universities perceived research usefulness to life significantly more than those students who were enrolled in the public sector universities. Effect size of the difference was low. Sabzwari, Kauser, & Khuwaja (2009), however, found that in Pakistan, doctors of the public sector were significantly more involved in the research than those of private sector. Significantly better perceived research usefulness to life in private sector universities in the current study can be attributed to the fact that in education discipline private sector is more quality conscious and competitive as compare to the public sector. Students are instructed to meet the requirement of global market. Their teachers have to demonstrate more dedication, commitment and persistent behavior to bring about change in the students’ attitudes towards research (Private sector education in Pakistan, 2010).

Measuring students’ attitudes toward the research is essential to investigate the interest and attitudes of students towards research. The present study concluded that there is a dire need to revise the teacher education programs for developing positive attitudes in the students toward research. Teacher educators must be equipped with effective strategies and pedagogies for developing positive attitudes toward the research among their students because it has importance for academic as well as professional career (Waters et al., 1988). In addition, by assessing students’ attitudes towards the research, teacher educators may be able to recognize what

modifications to behaviors, attitudes and skills are required to assist the learning of research and foster a deeper appreciation of this subject in students.

### **Implications for Future Study**

One limitations of this study was that sample size of this study was not adequate; only two private and public universities were selected from Lahore only. . Thus attitudes of students towards research at other institutions were remains unknown, which limits the generalization of the findings. Another limitation is related to data collection which was conducted one time only. A longitudinal study would be more worthwhile to observe the process of attitude change of students over time. The study does not indicate the baseline attitudes scores. It will be more valuable to conduct future study on pre-test and post-test research design to determine the attitudes of the students towards the research when they commence research subject and when they complete it.

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