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UNDERGRADUATE STUDENTS' ATTITUDE TOWARD RESEARCH IN PUBLIC SECTOR COLLEGES OF LAHORE

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ABSTRACT

The students' attitudes are more significant in the modern world than their experiences and academic preparation. A positive attitude toward research is the key to success and progress in knowledge-based societies. The study aimed to investigate undergraduate students' attitudes towards research in public sector colleges of Lahore. The population of this study comprised of B.Ed. (Hons.) students. The sample was selected over convenient sampling technique of 180 students from five public sector colleges in Lahore. A five-point Likert scale questionnaire developed by Papanastasiou was used for data collection. The data was analyzed through statistical package for social sciences-20 using descriptive and inferential statistics. A T-test was used to find differences based on gender. The results offered significant information for reaching the conclusion and making suitable decisions about research issues under study. It was revealed that most students had a positive attitude towards research. Moreover, there was a significant difference between the attitudes of males and females toward research, with more positive attitudes by male students.

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INTRODUCTION

Research is significant for innovation and discovery. The students with a positive attitude towards research are more likely to generate the novel ideas, explore new areas, and contribute uniquely to their fields. Engaging in research helps students develop valuable skills like problem-solving, data analysis, literature review, experimental design, and communication. A positive research attitude also improves students' academic achievement (Khan, Bibi & Khan, 2023). However, the students' attitudes towards the research can differ widely. Some view it positively, seeing it as interesting and

useful for their future (Siamian, Mahmoudi, Habibi, Latifi & Gavgani, 2016). Others have negative attitudes, finding research stressful, challenging, and irrelevant to their goals (Munir & Bolderston, 2009). Fear of failure, unpreparedness, and lack of interest are common negative perceptions. Many factors influence students' research attitudes. Gender appears to have a significant effect, though results are mixed. Some studies found males have positive attitudes (Saleem, Farid & Akhtar, 2015; Shaukat, S., Siddiquah, Abiodullah & Akbar, 2014), while others report females are more positive (Akpınar, Yıldız, Tatar & Ergin, 2009; Dhindsa & Chung, 2003), find no gender differences (Morrell & Lederman, 1998). Age and grade level also matter, with research enthusiasm often declining over time (Pell & Jarvis, 2001). Beyond individual attitudes, institutional factors shape research climate. Students in rural or under-resourced areas have fewer prospects and role models, dampening their research engagement.

The urban students tend to have slightly better research attitudes, possibly due to greater access & exposure (Zacharia & Barton, 2004). To cultivate positive research attitudes, experts recommend providing more information and support. The students need access to resources, facilities, guidance, funding, training, time to build research skills and confidence (Abulata, Ismail, Sabra, Alnezawi, Bazahair & Ahyaf, 2019; Soe, Wen, Chong, Chen, Shek, Tan & Fortier, 2018). A supportive culture at institution, that values and incentivizes research is crucial. Notably, some studies suggest positive attitudes and self-efficacy correlate with research engagement and productivity. The students at graduate level have more self-efficacy and a positive attitude and tend to have more publications. Research training also boosts positive attitudes and future research involvement (Kumari, Langer, Singh, Gupta, Sharma & Gupta, 2018). As the basis for individual learning and innovation, research has become central to social progress in the today's knowledge-driven world. Cultivating research dispositions in students is one of key purposes. These require engaging in research-related courses, building scientific attitude and spirit of inquiry, providing visible evidence via "hands-on" chances, & nurturing the disposition to continue learning throughout life (Swindoll, 2012). Educators can inspire students to engage in knowledge-creation process if they provide relevant research that pays off for the learner.

Objectives & Questions

1. To investigate students' attitudes toward research at the undergraduate level.
2. To investigate the students' attitudes towards the research with respect to gender.
3. What is undergraduate students' attitude toward research in educational institutions?
4. Is there any significant difference amid male & female students' attitudes towards research?

LITERATURE REVIEW

Research is increasingly recognized as a critical skill for undergraduate students across disciplines. Engaging in research fosters problem-solving abilities, critical thinking, and knowledge creation since critical thinking has been focused on the twenty-first-century skill needed by the leaders of the modern era. It has been focused in several national and international studies in policy document analysis, teachers' perspectives and practices (Jamil, 2021; Jamil, Anwar & Ali, 2024; Jamil, Aslam & Ali, 2024; Jamil, Bibi & Shahzadi, 2024; Jamil, Bokhari, & Ahmad, 2024; Jamil, Bokhari, & Iqbal, 2024; Jamil, Bokhari, & Rafiq, 2024; Jamil, Mahmood & Masood, 2023; Jamil, Mehmood

& Shah, 2024; Jamil & Muhammad, 2019; Jamil, Muhammad, Masood & Habib, 2020; Jamil, Muhammad & Qureshi, 2021a, 2021b). However, students' attitudes toward research significantly influence their motivation and performance in research-related coursework and activities. Several studies have described the diversity in attitudes undergraduate students maintain about research. Attitude toward research is revealed as acquiescent or resistant, with students exhibiting a mixed demeanor. Thus, some studies showed the positive perception of faculty work, while others did not appreciate what they saw.

While some students perceive research as a matter of interest and an important aspect of their future careers (Siamian et al., 2016), others view it as a hard, stressful activity that is not relevant to the professional goals pursued by them in formulating or resisting: both informal theorizing difficult emotional experiences through formal meaning-making. The course in research training seems to be a powerful predictor of good attitudes. Graduate students with more research experience and self-efficacy reported more positive attitudes (Rezaei & Miandashti, 2013). Similarly, Kumari et al. (2018) stated that students with formal research training were likelier to have a positive outlook on research than those without this experience. Perceptions of students are influenced by institutional factors, e.g., research facilities, availability and accessibility to mentorship from faculty members, and university academic culture, amid others (Soe et al., 2018). Inclusion of research methodology courses, practical research projects in curriculum can enhance students' interest and competence in research. Thus, research attitudes are also influenced by personal factors such as self-confidence, motivation, and past academic performance. Research attitudes by gender - mixed findings studies have shown that both male students have attitudes toward research (Bibi et al., 2012; Hussain et al., 2016; Levine, 2007).

Another study explored student teachers' positive attitude development regarding knowledge and skills (Linden et al., 2012). The attitude and anxiety related to the research and its impact on students' achievement were studied by Oguan et al. (2014). Another study by Muthuswamy et al. (2017) explored six factors affecting the doctoral students' attitudes toward research. Postgraduate students' attitudes towards research were observed in research by Shaukat et al. (2014). Research interests were explored through research supervision in different current studies in the Pakistani context (Iqbal et al., 2022; Riffat & Muhammad, 2019; Zafar et al., 2021). There is limited research directly comparing attitudes across academic disciplines. (Siamian et al., 2016) found that medical students held relatively positive views, perhaps due to the emphasis on evidence-based practice in healthcare as students' personal interest in research and its relevance to their career goals. There is a need for supportive policies and encouragement from the administration for student-led research initiatives and recognition and rewards for research accomplishments. Basudan et al. (2019) noted favorable attitudes among dental students linked to perceived benefits of research for professional progress. More studies are needed to examine potential variations across natural sciences, social sciences, and humanities.

RESEARCH METHODOLOGY

Since the study is quantitative research, a survey research design was employed to determine the level of attitudes of students toward research. The sample of this study was selected from five public

sector colleges in Lahore. Study sample comprised 200 students enrolled in four-year B.E. degree programs. The sample was selected using a convenient sampling technique. Researchers adopted a questionnaire developed by Papanastasiou in 2005. The tool is widely used to measure the students' attitude toward research. Questionnaire was based on 31 statements comprising five-point Likert scale response categories from strongly disagree (SDA) to strongly agree (SA). Researcher personally visited public colleges in Lahore to get data from the respondents. The researchers received a 90% response rate, i.e., 180 out of 200 respondents. Statistical Package for the Social Sciences (SPSS) 20 was used for data analysis. The descriptive statistics (mean, standard deviation) and inferential statistics (independent sample t-test) were used to analyze data. There were five factors and 31 items in questionnaire. Cronbach's alpha value was calculated as 0.7, which shows that research attitude scale was reliable.

Table 1 Demographic Distribution of Respondents According to Gender. (n=180)

Gender	Frequency	%
Male	38	21.1
Female	142	78.9
Total	180	100.0

The demographic distribution of respondents was presented here and the table shows that 38 male students from public colleges participated in the study. There were 142 female students (78.9%) from 180 students.

RESULTS OF STUDY

Table 2 Students' Response to Factor Research Usefulness

Statements	SDA	DA	N	A	SA
1	2.2%	1.1%	15.6%	45.6%	35.6%
2	2.2%	5.6%	13.3%	42.2%	36.7%
3	3.3%	4.4%	6.7%	44.4%	41.1%
4	1.1%	16.7%	23.3%	41.1%	17.8%
5	0.0%	5.6%	15.6%	48.9%	30.0%
6	1.1%	2.2%	16.7%	50.0%	30.0%
7	0.0%	3.3%	11.1%	47.8%	37.8%
8	0.0%	8.9%	14.4%	44.4%	32.2%

The results revealed that 35.6% of students strongly agreed, and 45.6% agreed with statement that research is interesting. While 15.6% were neutral, and 1.1% disagreed. On statement no. 2, 36.7% of students strongly agreed, and 42.2% agreed with statement that I like research. While 13.3% were neutral, 5.6% were disagreed, and 2.2% were strongly disagreed. On the other hand, 41.1% of students strongly agreed, and 44.4% agreed that research is useful for a career. Almost 6.7% were neutral, 4.4% disagreed, and 3.3% strongly disagreed with the statement 3. Almost 17.8% strongly agreed, and 41.1% agreed that I use research daily. While 23.3% were neutral, 16.7% disagreed and 1.1% were strongly disagreed. On statement no. 5, 30.0% of students strongly agreed, and 48.9% agreed with the statement that skills I have acquired in research will be helpful

to me in future. While 15.6% were neutral, 5.6% disagreed. On statement no. 6, 30.0% of students strongly agreed, and 50.0% agreed with statement that research is useful to my profession. While 16.7% were neutral, 2.2% were disagreed, 1.1% were strongly disagreed. It showed that 37.8% of students strongly agreed, and 47.8% agreed with the statement that research is valuable. While 11.1% were neutral, 3.3% disagreed. Statement 8 showed that 32.2% strongly agreed, and 44.4% agreed with statement that research is useful to every profession. While 14.4% were neutral, and 8.9% were disagreed.

Table 3 Percentages of Students' Responses to Factor Research Anxiety

Statements	SDA	DA	N	A	SA
1	8.9%	13.3%	18.9%	42.2%	16.7%
2	10.0%	15.6%	20.0%	37.8%	16.7%
3	7.8%	30.0%	23.3%	24.4%	14.4%
4	4.4%	21.1%	27.3%	33.3%	13.3%

The statement 1 shows that 16.7% of the students strongly agreed, and 42.2% agreed with the statement that research makes me anxious. Statement no. 2 showed that 16.7% of students strongly agreed, and 37.8% agreed with the statement that they feel insecure concerning the data analysis. Almost 14.4% of students strongly agreed, and 24.4% agreed with the statement that research courses scare them. While 23.3% were neutral, 30.0% were disagreed, and 7.8% were strongly disagreed. Similarly, on statement 4, 13.3 % strongly agreed, and 24.4% agreed with statement that the research creates stress. While 27.3% were neutral, 21.1% disagreed, and 4.4% were thus strongly disagreed.

Table 4 Percentages of Students' Responses to Factor Positive Attitudes

Statements	SDA	DA	N	A	SA
1	2.2%	3.3%	16.7%	45.6%	32.2%
2	1.1%	10.0%	12.2%	42.2%	34.4%
3	2.2%	4.4%	12.2%	44.4%	36.7%
4	2.2%	4.4%	10.0%	48.9%	34.4%
5	0.0%	5.6%	22.2%	53.3%	18.9%
6	2.2%	10.0%	24.4%	45.6%	17.8%
7	1.1%	7.8%	21.1%	43.3%	26.7%

Statement 1 shows that 45.6% agreed with the statement that they take a research interest. While 16.7% were neutral, 3.3% were disagreed, and 2.2% were strongly disagreed. It further showed that 36.7% of students strongly agreed, and 44.4% agreed that most students feel research is beneficial. While 12.2% were neutral, 4.4% were disagreed, and 2.2% were strongly disagreed. It showed that 34.4% of students strongly agreed, and 48.9% agreed with the statement that research is as useful. While 10.0% were neutral, 4.4% were disagreed, and 2.2% were strongly disagreed. It also showed that 18.9% strongly agreed and 53.3% agreed with the statement that they focus on the details of the research procedure carefully. While 22.2% were neutral, 5.6% disagreed. Statement no. 5 showed that 17.8% of students strongly agreed, and 45.6% agreed with the statement that research courses were easy. While 24.4% were neutral, 10.0% disagreed, and

2.2% were strongly disagreed. It showed that 26.7% of students strongly agreed, and 43.3% agreed with the statement that I enjoy research. While 21.1% were neutral, 7.8% were disagreed, and 1.1% were strongly disagreed.

Table 5 Percentages of Students' Responses to Factor Relevance to Life

Statements	SDA	DA	N	A	SA
1	4.4%	4.4%	11.1%	47.8%	32.2%
2	10.0%	22.2%	23.3%	31.1%	13.3%
3	1.1%	5.6%	18.9%	51.1%	23.3%
4	3.3%	4.4%	18.9%	51.1%	22.2%
5	4.4%	15.6%	37.8%	30.3%	12.2%

Statement no. 1 shows that 32.2% of students strongly agreed, and 47.8% agreed with statement that research courses should be taught. While 11.1% were neutral, 4.4% disagreed, and 4.4% strongly disagreed. It showed that 13.3% of students strongly agreed with statement 2, and 31.1% agreed with the statement that research thinking does not apply to my profession. While 23.3% were neutral, 22.2% were disagreed, and 10.0% were strongly disagreed. It showed that 23.3% of students strongly agreed with the third statement, and 51.1% agreed they would utilize research professionally. While 18.9% were neutral, 5.6% were disagreed, 1.1% were strongly disagreed. Statement 4 showed that 22.2% strongly agreed, and 51.1% agreed with statement that research-based thinking plays an important role. While 18.9% were neutral, 4.4% disagreed, and 3.3% strongly disagreed. Statement 5 results showed that 12.2% of students strongly agreed, and 30.3% agreed, research is indispensable. While 37.8% were neutral, 15.6% were disagreed, and 4.4% were strongly disagreed.

Table 6 Percentages of Students' Responses to Factor Research Difficulties

Statements	SDA	DA	N	A	SA
1	3.3%	34.4%	16.7%	34.4%	11.1%
2	2.2%	18.9%	27.8%	38.9%	12.2%
3	5.6%	23.3%	17.8%	40.0%	13.3%
4	10.0%	25.6%	25.6%	27.8%	11.1%
5	3.3%	14.4%	18.9%	38.9%	24.4%
6	3.3%	8.9%	23.3%	43.3%	21.1%
7	10.0%	32.2%	23.3%	23.3%	11.1%

Statement 1 shows that 35.6% of students strongly agreed, and 45.6% agreed with the statement that face difficulty in understanding research. While 16.7% were neutral, 34.4% were disagreed, and 3.3% were strongly disagreed. It showed that 12.2% of students strongly agreed, and 38.9% agreed with statement that I make mistakes in research. While 27.8% were neutral, 18.9% were disagreed, and 2.2% were strongly disagreed. Statement no. Three showed that 13.3% of students strongly agreed, and 40.0% agreed with the statement about calculation problems. While 17.8% were neutral, 23.3% were disagreed, 5.6% were strongly disagreed. It showed that 11.1% strongly agreed and 27.8% agreed with statement 4, which is research courses make them nervous. While 25.6% were neutral, 25.6% disagreed, and 10.0% strongly disagreed. Statement no 5 showed that 24.4% of students strongly agreed, 38.9% agreed with statement that research is complicated.

While 18.9% were neutral, 14.4% were disagreed, and 3.3% were strongly disagreed. It showed that 21.1% of students strongly agreed, 43.3% agreed with statement that research is a complex subject. While 23.3% were neutral, 8.9% were disagreed, and 3.3% were strongly disagreed. It showed that 11.1% of students strongly agreed, and 23.3% agreed with statement 7 that research seems irrelevant to their lives. While 23.3% were neutral, 32.2% were disagreed, and 10.0% were strongly disagreed.

Table 7 Factor-wise mean and standard deviation (n=180).

Factors	Mean	SD
Usefulness of Research	4.977	1.055
Anxiety towards research	2.636	0.675
Positive Attitudes	4.995	0.940
Research Relevance to Life	3.637	0.575
Research difficulties	2.644	1.123
Total	3.778	4.370

The above table shows undergraduate students' average response to research attitudes towards research. It shows that the first factor was related to research usefulness and mean = 4.9778 (SD = 1.05572), showing that most respondents strongly agreed that it would benefit them in the future. The mean value of factor 2, "research anxiety," was 2.6356 (SD = 0.675), and the statements were negative. After reversing the negative items, the Mean = 4.6356 (SD = 0.675) showed that students agreed they feel stress and anxiety related to research courses. Factor 3 was related to attitude towards research, and mean = 4.9956 (SD = 0.94069) showed they strongly agreed that they think positively about research. The factor 4 mean showed that (M = 3.6378; SD = 0.57501), they were neutral when considering its relevance to their daily life. The last factor was also based on negative items, and after reversing its mean value (M = 4.6444; SD = 1.12335), it was shown that they agreed that they faced difficulties in conducting research in public colleges of Lahore. The overall mean score (3.778) showed that students have an inclination and positive attitude towards research but seem neutral about it.

Table 8 Difference in Student's Attitudes towards Research Based on Gender

Gender	N	M	SD	t	df	p
Male	38	1.1989	11.00808	2.492	178	.014
Female	142	1.1287	16.38883			

Table shows significant difference amid male & female students' perceptions about attitude toward research, as t=2.492 and p=.014.

DISCUSSION & CONCLUSION

This research aimed to examine the students' attitudes towards research at the undergraduate level while studying in B.Ed programs. The first research question was related to the students' attitudes towards research studying in public colleges. The overall mean score showed students had a neutral response. The findings revealed that students research usefulness and identify its significance in their future careers. The findings align with research findings by (Abulata et al., 2019; Bibi et al.,

2012; Khan et al., 2023). The purpose of their study was to explore the attitudes towards research. The results revealed that undergraduate students had negative and positive attitudes towards research. The basic reason behind this finding can be the lack of research environment in public colleges. A single introductory course of research is offered at the undergraduate level. They hardly prepare a few chapters for exams. A single course does not give students the confidence to think positively about conducting the research. They face difficulties during different phases of research, from understanding concepts of research and designing research. Most students feel stressed when they analyze research.

The second research question was to determine the difference in students' attitudes toward research concerning gender. The findings showed a significant difference in students' attitudes concerning gender. Male students have a more positive attitude towards the research. The studies have similar results (Maqsood et al., 2019; Van Tran et al., 2023). A positive research culture develops a positive attitude toward research among undergraduate students. Based on the results, it is concluded that most of the students strongly agreed that research is useful for their careers and value it. It is also concluded that some students feel stress and they feel research anxiety at the undergraduate level, while some were neutral to this response. It is concluded that the students agree that research is interesting. It was concluded that it was difficult to decide when the students were asked about its relevance to their daily lives, and they responded neutrally. It is concluded that students agreed that they face difficulties conducting and learning different research steps. It is also concluded that there is significant difference amid male and female students about their attitude towards research with male dominance.

Recommendations

1. In this era, different research and statistical courses should be offered to undergraduate students at different level. It could be done by making research courses the core subjects of B.Ed. degree programs.
2. The results showed that the students feel stress and anxiety while conducting research. The students should be given opportunities to participate in small-scale research projects to nurture their expertise.
3. There is a need to conduct different research workshops, conferences, and seminars should be conducted to develop students' confidence in conducting research and understand how to face difficulties.

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