

Exploring Research Attitude in M.Ed. (Master of Education) Students: A Quantitative Study

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Abstract

Research attitude plays a crucial role in shaping the academic and professional growth of educators. This study explores the research attitude of M.Ed. students using a quantitative approach. Data were collected through the “Attitude Scale Towards Research” Scale developed by Dr. Vishal Sood & Prof. Y.K. Sharma. The present study aimed to investigate the research attitude among M.Ed. students and examine the differences based on semester and gender. A total of **170 M.Ed. students** (79 in 2nd semester and 91 in 4th semester in which 88 females and 82 males) were selected as the sample. Data were analysed using the **Chi-square test and Welch’s t-test**.

The results revealed a significant difference in research attitude levels between 2nd and 4th semester M.Ed. students, indicating that 4th semester students exhibited a higher level of research attitude. However, the gender-wise analysis showed no significant difference in research attitude between male and female students overall. Additionally, separate t-tests conducted within each semester also found no significant gender-wise differences.

The study concludes that while research attitude improves with progression in the M.Ed. program, gender does not play a significant role in determining students' research attitude. These findings highlight the importance of continuous exposure and engagement in research activities throughout the program to foster positive research attitudes among students. The results have significant implications for curriculum development, pedagogical strategies, and policy-making in M.Ed. programs to enhance research engagement.

Keywords: Research Attitude, M.Ed., Education

Introduction

Research is a cornerstone of educational advancement, serving as a vital tool for generating knowledge, informing practice, and fostering critical thinking among educators. For Master of Education (M.Ed.) students, who are often poised to become leaders, teachers, or academic researchers, a positive attitude toward research is essential. Research attitude—defined as an individual’s disposition, interest, and confidence in engaging with research activities—can influence their academic success and future contributions to the field of education. Despite its importance, the factors shaping research attitudes among M.Ed. students remain underexplored, particularly through a quantitative lens. Understanding these attitudes is critical, as they may affect how students approach research tasks, integrate evidence-based practices into teaching and contribute to educational scholarship. Gender, as a demographic variable, has been widely studied in educational contexts, with some evidence suggesting it may

influence attitudes toward academic pursuits. However, its role in shaping research attitudes among M.Ed. students is less clear. Differences in socialization, educational experiences, or career motivations could potentially lead to variations in how male and female students perceive and engage with research. Investigating such differences not only enriches our understanding of student diversity but also has practical implications for designing inclusive M.Ed. programs that foster research competency across all learners. This study aims to explore research attitudes among M.Ed. students using a quantitative approach, with a specific focus on examining the difference in research attitude between male and female students. By employing statistical analysis of survey data, the research seeks to determine whether gender significantly influences research attitudes in this population. The findings could inform curriculum development, teaching strategies and support mechanisms to enhance research engagement among future educators. This paper is structured as follows: a review of relevant literature, a description of the quantitative methodology, an analysis of the results and a discussion of their implications for M.Ed. programs and future research.

Objectives

1. To compare the research attitude levels between M.Ed. 2nd Semester and 4th Semester students.
2. To examine the difference in research attitude between male and female M.Ed. Students.
3. To analyse the difference in research attitude between male and female students within each semester of the M.Ed. program.

Hypothesis

1. There is no significant difference in research attitude between M.Ed. 2nd Semester and 4th Semester students.
2. There is no significant difference in research attitude based on gender among M.Ed. students.
3. There is no significant difference in research attitude between male and female students within each semester.

Literature Review

Study conducted by Dr. J.K. Joshi (2021) titled Attitude of Student Teacher-Educators (M.Ed. Students) Towards Research states that tend of attitude towards research is positive in M.Ed. students and gender, stream and even semester is not an affecting variable on the attitudes of the M.Ed. Students towards research.

According to study “Attitude of M.Ed. Students towards Research work” conducted by Arunkumar, K. & Premlatha, T. (2018) the level of research attitude among the M.Ed. students is high. Research attitude of M.Ed. students whose age below 25 and above 25 was similar while Rural area M.Ed. students had better research attitude than urban students.

Muthuswamy P. and others (2017) conducted “A study on Attitude towards research among the Doctoral students”. The study found that a positive attitude towards research is a key to success and progress in the knowledge-based societies.

Butt and Sham (2013) conducted “A study in Master in education students” attitudes towards research: A comparison between two public sector universities in Punjab, which explored the student teacher attitudes towards research”. The result showed that student teachers have a negative attitude towards research.

Methodology of Research

• Research Method

The present study is quantitative in nature and employed a descriptive survey method to explore the research attitude among M.Ed. students.

• Population and Sample

The population of the study comprised M.Ed. students from two teacher training colleges of Raipur and Bilaspur since both colleges have same pattern of course with same entrance exam for admission. M.Ed. 2nd semester students were selected because they have completed their initial research methodology courses and have some exposure to research concepts. A total of 170 students were selected using the purposive sampling technique, including:

Name of College	Class	Female Students	Male Students	Total
Govt. College of Teacher Education, Shankar Nagar, Raipur	M.Ed. 2 nd Semester	18	13	84
	M.Ed. 4 th Semester	28	25	
Institute of Advanced Studies in Education, Bilaspur	M.Ed. 2 nd Semester	25	23	86
	M.Ed. 4 th Semester	17	21	
Total		88	82	170

• Research Tool

The "Attitude Scale Towards Research" developed by Vishal Sood & Prof. Y.K. Sharma, was used as the research tool.

The tool, assessing various dimensions of research 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, attitude towards difficulties in research and research anxiety, consists of 42 items rated on a 5-point Likert scale ranging from *Completely Agree* to *Completely Not Agree*. Both positive and negative items are included, with reverse scoring applied to negative items.

• Data Analysis Techniques

The collected data were analysed using appropriate statistical techniques:

- Chi-square Test was used to test the difference in research attitude levels between 2nd and 4th semester students.
- Welch's t-test (Since there is difference sample numbers for male and female students and variance or SD are different for both groups) is applied to:

Compare research attitude between male and female students overall.

Compare gender-wise differences within each semester separately.

$$\text{Degree of freedom is corrected with formula } df = \frac{\left(\frac{SD_1^2}{n_1} + \frac{SD_2^2}{n_2}\right)^2}{\frac{\left(\frac{SD_1^2}{n_2}\right)}{n_1-1} + \frac{\left(\frac{SD_2^2}{n_2}\right)}{n_2-1}}$$

All statistical calculations were performed using MS Excel and statistical formulas.

Data Analysis and Interpretation

The collected data were analysed using Chi-square test and Welch's t-tests to test the hypotheses framed for the study. The analysis was done semester-wise and gender-wise to interpret the research attitude of M.Ed. students. The detailed results are as follows:

Hypothesis 1

There is no significant difference in research attitude between M.Ed. 2nd Semester and 4th Semester students.

Table 1 Norms for Interpretation of Level of Attitude Towards Research

S.No.	Range of Raw Scores	Level	Grade	Level of Attitude towards Research
1	196 and above	HIGH	A	Extremely favourable
2	170 to 195		B	Highly favourable
3	160 to 169	MODERATE	C	Above Average favourable
4	150 to 159		D	Moderately favourable
5	141 to 149	LOW	E	Unfavourable
6	132 to 140		F	Highly Unfavourable
7	131 and below		G	Extremely Unfavourable

Table 2 M.Ed. Second Semester Attitude toward Research

College	Low	Moderate	High	Total
Raipur	08 (26%)	10 (51%)	13 (23%)	31
Bilaspur	13 (27.1%)	24 (50%)	11 (22.9%)	48
Total	21 (26.6%)	34 (43%)	24 (30.4%)	79

M.Ed. Fourth Semester Attitude toward Research

College	Low	Moderate	High	Total
Raipur	09 (17%)	12 (22.6%)	32 (60.4%)	53
Bilaspur	02 (27.1%)	17 (50%)	19 (22.9%)	38
Total	11 (12.1%)	29 (31.9%)	51 (56%)	91

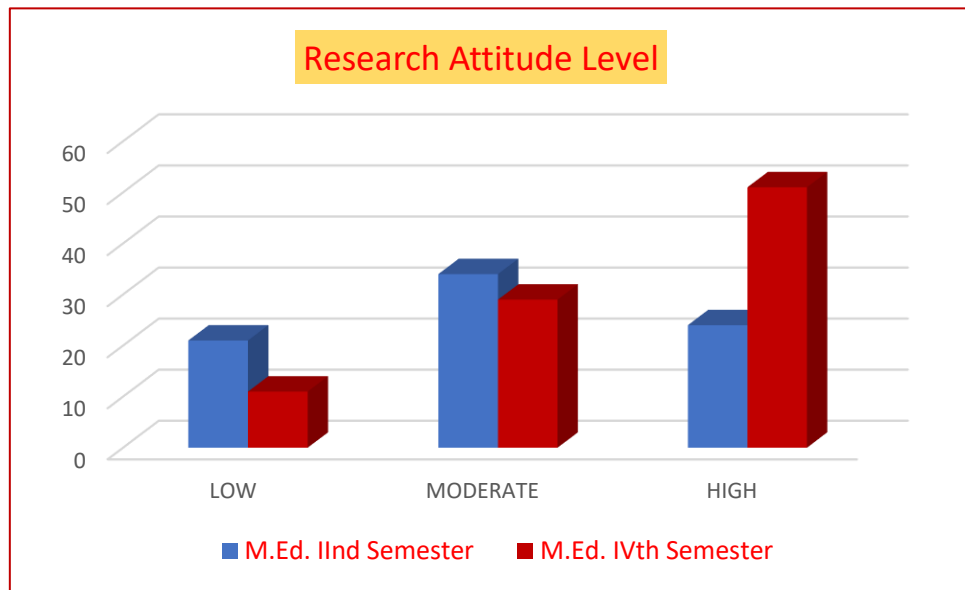


Figure 1: Comparison of Research Attitude Level

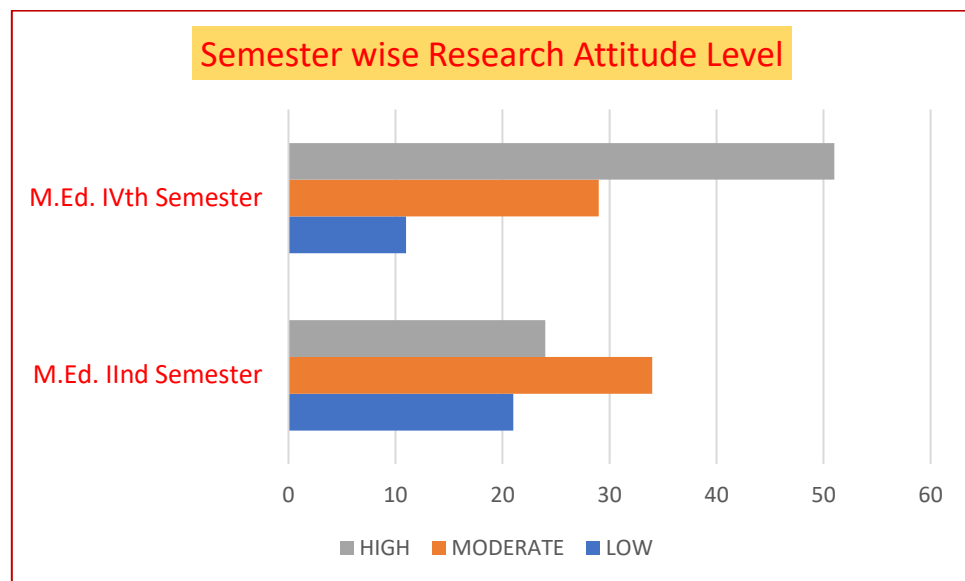


Figure 2: Semester wise Research Attitude Level

A Chi-square test of independence was conducted to examine the difference in research attitude levels between M.Ed. 2nd sem. and 4th sem. students. The results are presented in Table 3 -

Table 3 Observed and Expected Frequencies

Semester	Low (O/E)	Moderate (O/E)	High (O/E)	Total
M.Ed. 2nd	21 / 14.87	34 / 29.27	24 / 34.85	79
M.Ed. 4th	11 / 17.13	29 / 33.73	51 / 40.15	91
Total	32	63	75	170

The Chi-square value calculated was $\chi^2 (2, N = 170) = 12.43$, $p < .05$. Since the calculated value exceeds the critical value (5.991), the null hypothesis is rejected.

Conclusion:

There is a significant difference in research attitude levels between M.Ed. 2nd semester and 4th semester students. The 4th semester students demonstrate a higher level of research attitude, indicating the positive impact of research exposure over the program duration.

Hypothesis 2

There is no significant difference in research attitude between male and female M.Ed. students.

Table 4 Gender-wise data for the Independent Sample t-test:

Gender	Mean	Standard Deviation	Sample (n)
Female	163.4318	14.34773	88
Male	166.3415	16.62975	82

Welch's t-test was conducted to compare the research attitude scores of Female and Male M.Ed. students. The results showed that female students ($M = 163.43$, $SD = 14.35$, $n = 90$) and male students ($M = 166.34$, $SD = 16.63$, $n = 84$) did not differ significantly in their research attitude scores, **$t(\text{calculated}) = 1.214 < t(\text{critical}) = 1.975$ at 0.05 level of significance, $p = 0.112608 > 0.05$** for corrected degree of freedom $df = 161$.

Conclusion:

Since the calculated t-value is not significant, the null hypothesis is failed to rejected. This indicates that there is no significant difference in the research attitude between male and female M.Ed. students.

Hypothesis 3

There is no significant difference in research attitude between male and female students within each semester.

Table 5 Semester wise Gender data for Welch's t-test

Semester	Gender	Mean	SD	n
M.Ed. 2 nd Semester	Male	164.72	17.05	36
M.Ed. 2 nd Semester	Female	162.14	13.48	43
M.Ed. 4 th Semester	Male	167.61	16.37	46
M.Ed. 4 th Semester	Female	164.67	15.18	45

Corrected degree of freedom from Welch's t-test $df = 66$

Comparison	t-value
2 nd Semester (Male vs Female)	0.74
4 th Semester (Male vs Female)	0.89

Critical t-value at $df = 66$ at 0.05 level of significance is ± 1.997 . Both calculated t-value is less than the critical t-value.

Conclusion:

Since the calculated t-value is not significant, the null hypothesis is failed to rejected. There is no significant difference in research attitude between male and female students within each semester.

Discussion

The present study aimed to explore the research attitude among M.Ed. students and analyse the influence of semester and gender on their research attitude. The results obtained through statistical analysis provide significant insights into the research behaviour and mindset of future educators.

The first hypothesis tested the difference in research attitude between M.Ed. 2nd semester and 4th semester students. The findings revealed a significant difference between the two groups. Specifically, 4th semester students exhibited a higher level of research attitude compared to their 2nd semester counterparts. This suggests that as students' progress through the M.Ed. program, their exposure to research activities, projects and thesis work positively enhances their attitude towards research. It also reflects the effectiveness of curriculum design, where research components are more actively integrated in the later part of the program.

The second hypothesis examined the difference in research attitude between male and female students. The independent sample t-test (Welch's t-test) results indicated no significant difference in research attitude based on gender. Both male and female students demonstrated similar attitudes towards research. This aligns with the expectation that research attitude is influenced more by educational exposure, motivation and academic environment rather than gender differences. The finding also reflects the equal academic potential and interest in research among male and female students in the field of teacher education.

The third hypothesis further analysed gender-based differences within each semester. Separate t-tests conducted for the 2nd and 4th semesters showed that the differences in mean scores of male and female students were not statistically significant in either semester. This finding reinforces the earlier result that gender does not play a significant role in determining students' research attitude, regardless of their level of study.

Overall, the results of the study suggest that progression in the M.Ed. program positively impacts students' research attitude, while gender has no significant influence. The findings underline the importance of structured research exposure and practice within the curriculum to develop favourable research attitudes among future educators.

Suggestions for Future Research

As per NCTE's newest proposed guidelines, the M.Ed. program may also be offered as a one-year course. Future studies should explore the effectiveness of the one-year and two-year M.Ed. programs in developing research attitude among students. This comparison would help evaluate the capability of both program durations in building research skills and attitude in teacher educators.

- A comparative study can be conducted on one-year and two-year M.Ed. programs, as proposed by NCTE, to assess the effectiveness of both courses in developing research attitudes among students.
- Further research can explore other factors like teaching experience, research publications or institutional support that might influence the research attitude of M.Ed. students.
- Similar studies can be extended to B.Ed. or Ph.D. level programs to understand research attitudes at different stages of teacher education.

Educational and Social Implications

The findings of this research hold significant educational and social implications for teacher education programs, policy makers and future researchers.

Educational Implications

Curriculum Improvement: The study highlights that research attitude improves as student's progress in the M.Ed. program. This suggests the need to integrate research-oriented activities systematically throughout the curriculum, especially in the initial semesters, to develop a positive research attitude from the beginning.

Practical Exposure to Research: Institutions should focus on providing hands-on research experiences, workshops and seminars to help students connect theoretical knowledge with practical research skills.

Teacher Educator's Role: Teacher educators play a crucial role in shaping research attitudes. Continuous motivation, guidance and mentoring can enhance students' confidence and interest in research work.

Assessment Reforms: The findings indicate the need for innovative assessment practices that evaluate not just knowledge but also students' research skills and attitude, preparing them for evidence-based teaching practices.

Social Implications

Promotion of Research Culture: A positive attitude towards research among future educators contributes to building a research culture in educational institutions, which is essential for addressing local educational challenges.

Professional Development: M.Ed. graduates with strong research attitudes are more likely to engage in continuous professional development, conduct action research and contribute to improving the quality of education in society.

Policy Making: The study supports the formulation of policies that emphasize research as a core component of teacher education. This will help produce teachers who are reflective, analytical and capable of making data-driven decisions.

Social Change Agents: Research-oriented teachers are better equipped to act as agents of social change, using research findings to address social issues, improve educational practices and contribute to community development.

Overall, the study emphasizes the importance of nurturing research attitudes among M.Ed. students. By strengthening research components in teacher education, we prepare future educators to become lifelong learners, critical thinkers and contributors to educational reforms and social betterment.

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