



Article Type: Research Article

Article Ref. No.: 20062000220AF

<https://doi.org/10.37948/ensemble-2020-0202-a005>



## ATTITUDE, AWARENESS AND BARRIERS IN RESEARCH: A STUDY ON THE POST-GRADUATE STUDENTS AND RESEARCH SCHOLARS IN WEST BENGAL

Subrata Bachhar<sup>1</sup> , Ajit Mondal<sup>2</sup> 

### Abstract:

The purpose of the present study was to examine the attitude, awareness and barriers in research on the Post-Graduate (PG) Students and Research Scholars under the universities in West Bengal. The researchers have adopted the descriptive research method and its approach is quantitative for measuring the attitude, awareness and barriers in research. In keeping the variables (Gender, Locality, and Stream) in mind, 150 Post Graduate Students and 140 Research Scholars were selected as sample from the University of Calcutta, University of Kalyani and University of Burdwan in West Bengal. An Attitude Scale based on Likert's 5-point scale (Bi-polar on 40 items) was developed and used by investigators for measuring their attitude towards research. For the awareness about research methodology, an Awareness Scale based on Likert's 4-point scale containing 30 items was developed. To explore the barriers to doing research, researchers developed 10 Statements with the help of experts and it's a tri-polar scaling method indicating 'Yes', 'No' and 'Can't say'. The result indicated that the Post-Graduate Students and Research Scholars differed significantly in their attitude towards research. The Post-Graduate Students showed a more positive attitude towards Research than the Research Scholars. The Research Scholars belonging to the social science & humanities and science stream showed significant difference in their awareness about research methodology. Despite having self-interest in research (70%) among the research scholars, the barriers to conducting research faced by them markedly included barriers related to institutional affairs (65.7%), lack of research funding (75%), inadequate research facilities (69.2%), lack of research skills and knowledge (59.2%), lack of professional supervisors (77.1%), difficulty in collecting reliable and valid data (80%) and uncertainty of employment (67.8%).

**Article History:** Submitted on 20 Jun 2020 | Accepted on 13 Feb 2021 | Published online on 19 May 2021


**Keywords:** Human Resource, Higher Education, Innovations, Knowledge and Skills, Development

### 1.0 Introduction:

Higher education is a very important sector for the growth and development of human resource which can take responsibility for social, economic and scientific development of the country. Higher education has a direct link with the upliftment of the society as a whole. But the overall contribution of Indian researches being carried out at higher education institutions is not much good in terms of quality (Mondal & Mete, 2013, p.8). The University Education Commission (1948-

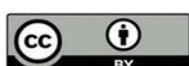
1 [Author] Assistant Professor, Department of Education, Surendranath College for Women (University of Calcutta), 24 M. G. Road, Kolkata – 700009, West Bengal, INDIA

 ORCID ID: 0000-0002-1641-4764

2 [Author]  [Corresponding Author] Assistant Professor, West Bengal State University, Berunanpukuria, Malikapur, Barasat, 24 Parganas (North), Kolkata – 700126, West Bengal, INDIA. E-mail: mondalajit.edn@gmail.com

 ORCID ID: 0000-0003-4143-0341

© 2021 Ensemble; The author



This work is licensed under Creative Commons Attribution 4.0 International License



49), under the chairmanship of Dr. Radhakrishnan, gave the foundations of the future of Indian higher education. The report of the Education Commission (1964-66) under the Chairmanship of Dr. D.S. Kothari reflected the symbiotic relationship between education and national development (UGC, 2011, P. 8). The report of this Commission thus began with the statements that, "The destiny of India is now being shaped in her classrooms. This, we believe, is no mere rhetoric. In a world based on science and technology, it is education that determines the level of prosperity, welfare and security of the people" (Govt. of India, 1966, para. 1.01). The National Policy on Education (NPE), 1986 also reiterated that:

"Higher education provides people with an opportunity to reflect on the critical social, economic, cultural, moral and spiritual issues facing humanity. It contributes to national development through dissemination of specialized knowledge and skills. It is, therefore, a crucial factor for survival ... in the context of the unprecedented explosion of knowledge, higher education has to become dynamic as never before, constantly entering uncharted areas" (Govt. of India, 1986, paras. 5.24 & 5.25).

The University Grants Commission stated in the seminar 'Higher Education in India: Issues, Concerns and New Directions' during its Golden Jubilee Year, 2003 that "the Universities have to perform multiple roles, like creating new knowledge, acquiring new capabilities and producing an intelligent human resource pool, through challenging teaching, research and extension activities so as to balance both the need and the demand ... "(UGC, 2003, p. iii).

The University Grants Commission (2019) accordingly put emphasis on the promotion of a culture of research amongst faculty and students with an objective of improving research. It also recommended some strategies for promoting a culture of research among them, such as, faculty recruitment from the candidates with interdisciplinary backgrounds, provision for providing seed grants for newly appointed faculty, travel grants for faculty and students, Fellowships for Ph.D. scholars for self-financed/ minimal financial support on a competitive basis, teaching assistantship as part of doctoral program, etc (pp. 7-9).

The Draft National Education Policy, 2019 meticulously stated that "the biggest lacuna in the present education system is the lack of a coherent direction for planning and implementation of research at the university level" (p. 30). This policy also observed that "At the current time, there is no mechanism to seed or mentor research at universities and colleges where research is in a nascent stage particularly at State Universities where 93% of all students in higher education are enrolled. In addition, very little funding is available for novel research ideas and proposals at most HEIs ..." (MHRD, 2019, p. 205). To this effect, it proposed for the very first time a new National Research Foundation (NRF) to focus on funding research within the education system, primarily at colleges and universities.

India's higher education sector is the third-largest in the world, next only to the United States and China. Since independence in 1947, improving quality, wider access, and greater equity in higher education (HE) have been the aspirations of India (Sarin & Dholakia, 2016, p. 55). According to the All India Survey on Higher Education (AISHE, 2018-19), it has more than 993 universities, 39931 colleges, 10725 Stand Alone Institutions with 3.73 crore students and 14.16 lakh teachers. Gross Enrolment Ratio (GER) in Higher education in India is 26.3%, which is calculated for 18-23 years of age group. Moreover, 40,813 students were awarded Ph.D. level degree during 2018 with 23,765 males and 17,048 females. At present, there are 27 State-aided Universities including 1 Women University and 1 State Open University, 1 Deemed University, 1 Central University, 7 Institutes of

Higher Learning and 10 Private Universities in West Bengal. In West Bengal, the Gross Enrolment Ratio (GER) 13.6% in 2011-12 rose to 19.3 % in 2019-19 (AISHE, 2018-19, MHRD).

In doing research, students gain and develop essential knowledge and skills for gathering, synthesizing, generating and expanding knowledge. Research being the central key to the knowledge generation and expansion is a decisive factor to the entire developmental process and welfare of a country. In general, research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue (Creswell, 2012, p. 3). It involves posing a question, collecting data, and analyzing data to find out the answer to the question. Research is essentially an investigation, a recording, and an analysis of evidence for the purpose of gaining knowledge (Ross, 1974, p. 4). However, a research study is conducted through a distinct set of steps, such as identifying a problem, reviewing the literature, specifying the rationale, collecting data, analysing and interpreting the data, evaluating the study etc. Research methodology and methods may differ from discipline to discipline. However, each researcher, irrespective of discipline, must have clear concept about the cardinal steps in research. W. Lawrence Neuman (2014) has nicely explained the dichotomy between the methodology and methods that:

“The terms may seem to be synonyms, but methodology is broader and envelops methods. Methodology means understanding the entire research process —including its social-organizational context, philosophical assumptions, ethical principles, and the political impact of new knowledge from the research enterprise. Methods refer to the collection of specific techniques we use in a study to select cases, measure and observe social life, gather and refine data, analyze data, and report on results. The two terms are closely linked and interdependent” (p.2).

Adequate knowledge and skills about the research methodology and methods are the essentials for the participation of the students in research. It is generally recognized that interest in research promotes a favourable attitude towards research. In spite of these, students and researchers need barrier free supportive environment for research. Why research in the higher education institutions in India is at a crossroads needs to be examined further. Against this backdrop, the present study has been necessitated to explore the level of awareness and attitude among post graduate students and research scholars towards research. Another attempt has also been made herein to comprehensively investigate the degree of obstacles faced by the research scholars for conducting research in the domain of higher education institutes in West Bengal.

### ***1.1 Related Literature:***

Our search through literature has led us to a number of related studies evaluating the attitude, awareness and barriers to conducting research among PG level students and research scholars in India.

**Mathur (2019)** conducted an empirical study to explore the issues and problems faced by researchers of Delhi during their Ph. D. among 100 researchers of different institutes of Delhi. The results showed that the types of problems the Ph.D. scholars generally experienced during their research were diverse in nature. The main causes of their problems occurring during research were stress and work pressure, academic problems, irregular course work and examination, and lack of professional research guides, costs incurred in the research etc. **Roul (2018)** made a study to determine the attitude of post-graduate students (120) studying in different programmes under the North Orissa University. The major findings of this study were that there was no significant

difference in PG students' attitude towards research with respect to their gender. But the PG students belonging to Science stream had less interest to conduct research than the Arts stream students. Again, there was no significant difference on attitude towards research between PG students studying professional and general courses. **Vairamani & Akoijam (2018)** executed a cross sectional study to assess the knowledge, attitude and perceived barriers towards conducting research among medical students (post-graduates and interns) in the easternmost medical college of India during November and December 2015. Out of the total 493 participants, 440 responded to the questionnaire. More than 3/5<sup>th</sup> of the respondents had inadequate level of knowledge of conducting research. Inadequate training (87%), lack of funding (76%), lack of motivation (67%) and no mentorship programme (66%), were the major reasons cited by the respondents for not participating in research projects. **Kini et al. (2017)** conducted a cross-sectional study among third and fourth year MBBS students at KS Hegde Medical College, Mangalore to find out their perception, attitudes and practices towards research. The study revealed that the majority of the students agreed that research was important in the medical field (88.6%, 195/220). The majority also considered research methodology to be part of medical curriculum (72.7%, 160/220). 31.8% (70/220) felt that research methodology was helpful to enter competitive examinations. The study also explored the barriers for conducting research as believed by students to be lack of interest (32.7%, 72/220), lack of time (31.4%, 135/220), inadequate knowledge about research methodology (51.4%, 113/230), lack of guidance by faculties (27.7%, 61/220), lack of research curriculum (34.1%, 75/230), inadequate facilities for research (35.5%, 78/220), inadequate financial support (30.9%, 68/220), and others 2.9% (6/220). **Singh (2015)** carried out an investigation to determine the significance of difference in M.Ed. students' attitude towards research in the Ludhiana District of Punjab with respect to their academic stream. The study revealed that M.Ed. students of Science and Arts streams did not differ significantly in the dimensions of attitude (like, general aspects of research and research process, usefulness of research in professional career, and relevance of research in personal social life) towards research. Moreover, M.Ed. students of Science stream had significantly better attitude towards research as compared to students of Arts stream in dimension (difference in research and research anxiety and total attitude towards research of attitude towards research. **Singh & Kaur (2015)** undertook a study to investigate the significance of difference in M.Ed. students' attitude towards research with respect to the type of college. The study revealed that attitude towards research of M.Ed. students from Government-aided colleges was significantly better as compared to M.Ed. students from Private colleges. **Deka, Misra & Patel (2015)** in their study 'Attitudes of Post-Graduate Students towards Research' found that most of the Post Graduate students studying in post-graduate departments of Degree College of Physical Education run by Shree Hanuman Vyayam Prasarak Mandal, Amravati showed poor attitude towards research. In general aspect of research and research process dimensions, significant difference in their attitude was witnessed. MCA students showed more favourable attitude towards research than MBA students. **Suresh Kumar (2015)** carried out an investigation to find out the level of attitude of M. Ed. students from six colleges of education in Vellore District of Tamil Nadu towards research programme. The result revealed that all the students of M. Ed. Programme showed favourable attitude towards research. However, significant difference existed in the attitude towards research with respect to different demographic variables. Students from joint family showed high mean scores than those from nuclear family. Government college students showed high mean score in the attitude towards research than their private-college counterparts. **Shah & Purani (2014)** made an investigation to assess the attitude of students pursuing M. Ed. and M. Phil. Programmes in the PG Educational colleges of Ahmedabad city towards research. Out of 70 students of the sample, 17.14% students had higher level of attitude towards research, 65.72% students had middle level of attitude towards research and 17.14% students had lower level of attitude towards research. The study also revealed that there was no

significant difference in the attitude towards research among the students of M.Ed. and M. Phil., but the girls had more positive attitude than boys towards research.

Thus, a number of researchers have already examined the attitude, perception and barriers related to research among the students at PG level in different streams and students pursuing M. Phil & M. Ed. courses and MBBS students and Interns in India. However, an in-depth study is needed more in these domains in India for assessing the degree of attitude and awareness about research methodology and for exploring their barriers to conducting research. Dearth of research in such domains is also remarkably noticeable in West Bengal.

### ***1.2 Rationale of the Study:***

Despite the growing volume of literature in research, the task of harvesting evidence on attitude, awareness and barriers in research from the students' and scholars' end is the need of the hour. In India, research is an important and distinct area of any discipline at post-graduate level. During these programmes, it is highly expected that students will be able to get acquainted with research methodology. And their theoretical knowledge about methodology is supplemented with dissertation, field study, project work etc. After completion of PG, they are generally involved in Ph. D. programme, not for mere award, but for generating new knowledge, solving societal and human problems etc. Higher education institutes have a crucial role in developing the spirit of research among the learners for meeting the needs of the fast-changing society by generating new knowledge. However, for doing research, positive attitude and methodological knowledge about research among PG students and research scholars in one hand and barrier-free research-worthy supportive environment need to be ensured in the other hand. Before entering into the world of research and during research period, it is prevalent that scholars face several issues and barriers to an extent which is very detrimental to effective research. So, it is highly appropriate to conduct a study in search of attitude, barriers and awareness about research among the PG students and research scholars in the higher education institutions in West Bengal.

This study will definitely produce a range of policy outcomes and those can be used by the Central as well as State Governments, educators, policymakers, academic administrators, academicians and researchers in the formulation of more evidence-based education policy, programmes and regulations in Indian higher education system. Such outcome of the study will also definitely give a new vista towards promotion of favourable attitude towards research among the post-graduate students and research scholars. Lastly, these results could lead to an increased involvement of PG students and research scholars in research. The results will surely lead to a better world of research and researchers in India. Another bright prospect is that the study attempts to listen to the unheard voices of researchers and to address their saga of hurdles with an eye to suggesting possible ways of eradicating the barriers of the researchers in general.

### ***1.3 Statement of the Problem:***

Considering the above-discussed subject and rationale of the study, a number of research questions emerged in the mind of the researchers. The researchers were interested in exploring the attitude, awareness and barriers in research of the post graduate students and research scholars in West Bengal.

### ***1.4 Objectives of the Study:***

- To evaluate the attitude of the Post-Graduate Students and Research Scholars in West Bengal towards research.

- To compare the level of attitude between Post-Graduate Students and Research Scholars in West Bengal towards research.
- To compare the attitude of Post-Graduate Students towards research in relation to their Gender, Locality, and Stream.
- To compare the attitude of Research Scholars towards research in relation to their Gender, Locality, and Stream.
- To compare the awareness of the Research Scholars in West Bengal about research methodology and methods with respect to their stream i.e. Social Science & Humanities, and Science.
- To explore the barriers to conducting research faced by the Research Scholars in West Bengal.

### ***1.5 Hypotheses of the Study:***

On the basis of research objectives, the researchers have framed the following null hypotheses:

- **Ho.1:** There exists no significant mean differences in the attitude of Post-Graduate Students and Research Scholars towards research.
- **Ho.2:** There exists no significant mean differences in the attitude of Post-Graduate Students towards research with respect to their Gender, Locality, and Stream.
- **Ho.3:** There exists no significant mean differences in the attitude of Research Scholars towards research with respect to their Gender, Locality, and Stream.
- **Ho.4:** There exists no significant mean differences in the awareness of Research Scholars about research methodology and methods with respect to their stream i.e. Social Science & Humanities, and Science.

### ***1.6 Operational Definitions of Terms used in the Study:***

- **Post-Graduate (PG) Students:** Post-Graduate (PG) Students referred to the students who have been pursuing two-year academic programmes at post-graduate level after completion of an Honours Degree Course of 3 years duration in West Bengal.
- **Research Scholars:** Research Scholars referred to the scholars who have been pursuing Doctorate of Philosophy (Ph. D.) programme under the universities in West Bengal after Post-Graduation or M. Phil, having the duration of 3/4/5 years with fellowship or without fellowship.
- **Attitude:** In the present study, the term 'Attitude' meant the opinion or views of the PG students and Research Scholars in West Bengal.
- **Awareness:** The term 'Awareness' meant the knowledge and skills of the research Scholars in West Bengal about the research methodology and methods.

## **2.0 Materials and Methods:**

**2.1 Methods:** To conduct the present study, the researchers used descriptive research method and its approach is quantitative for measuring the attitude, awareness and barriers in research of the Post-Graduate Students and Research Scholars in West Bengal.

**2.2 The Sample and Sampling Procedure:** For the selection of sample, stratified random sampling technique was adopted for this study. In keeping the variables (Gender, Locality, and Stream) in mind, 150 Post-Graduate students and 140 Research Scholars were selected from the universities in West Bengal, namely University of Calcutta, University of Kalyani and University of Burdwan. Sample distribution is given in the Fig. 1.

**2.3 Variables of the Study:** In the present study two types of variables – three Independent Variables (Gender, Locality, and Stream) and two Dependent Variables (Attitude and Awareness) were used.

**2.4 Tools of the Study:**

- **Attitude:** An Attitude Scale based on Likert’s 5-point scale was developed and used by investigators. It was a bi-polar scaling method to indicate positive or negative response to a statement. This standardized measure consisted of 40 items, encompassing different dimensions of research. The reliability score was 0.71 and content validity was established with the help of experts.
- **Awareness:** On the other hand, for the awareness about research methodology and methods, an Awareness Scale based on Likert’s 4-point scale was developed and used by investigators. This standardized measure consisted of 30 items, covering different dimensions of research methodology. The reliability score was 0.78 and content validity was established with the help of experts.
- **Barriers:** To explore the barriers to conducting research amongst the Research Scholars (N = 140) in West Bengal, researchers developed 10 Statements with the help of experts and it was a tri-polar scaling method to indicate ‘Yes’, ‘No’ and ‘Can’t say’.

**2.5 Statistical Techniques for Data Analysis:**

The following techniques were used for measuring the attitude, awareness and barriers towards research of the Post-Graduate Students and Research Scholars –

- Mean
- Standard Deviation (Descriptive Stat.)
- Bar-graph
- t-test (Inferential Stat.), and also 0.05 level and 0.01 level of significance were used to test the hypothesis.
- ANOVA (F-ratio).

**3.0 Analysis and Interpretation of the Results:**

**3.1 Study of the Attitude of the Post-Graduate Students and Research Scholars towards Research in West Bengal:**

Table 1 and Fig. 2 show that 30% Post-Graduate Students and 12.8% Research Scholars came under High Attitude Score Group. 46.6% Post-Graduate Students and 60.7% Research Scholars belonged to Average Attitude Score Group. In case of Lower Attitude Score Group, 23.3% Post-Graduate Students came while 26.4% Research Scholars fell under this category.

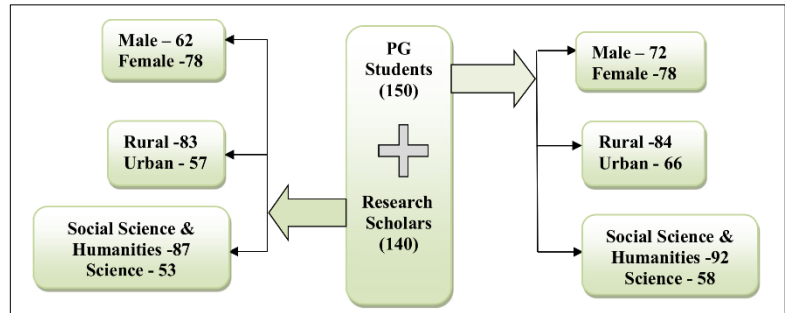
**Table 1: Attitude of the PG students and research scholars according to scale norms**

Attitude Score Group	Response of PG Students	Response of the Research Scholars
High	45 (30%)	18 (12.8 %)
Average	70 (46.6%)	85 (60.7 %)
Low	35 (23.3 %)	37 (26.4 %)
Total	150	140

Source: Author

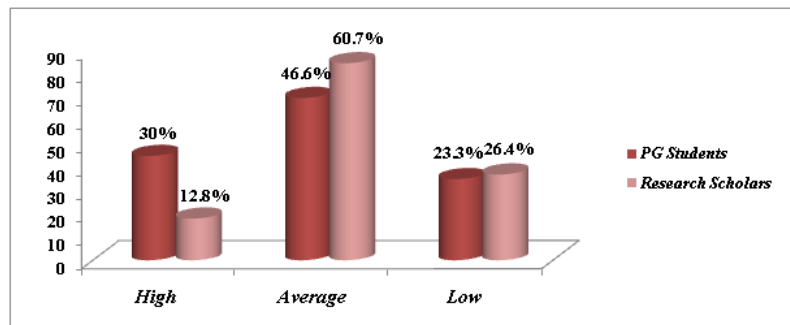


Fig. 1: Sample Distribution



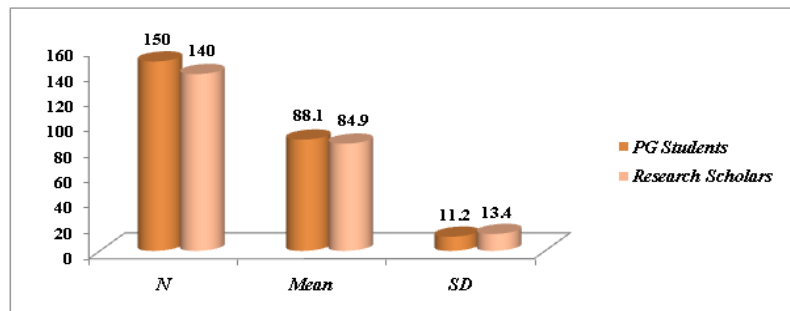
(Source: Author's illustration)

Fig. 2: Attitude of the PG Students and Research Scholars towards Research



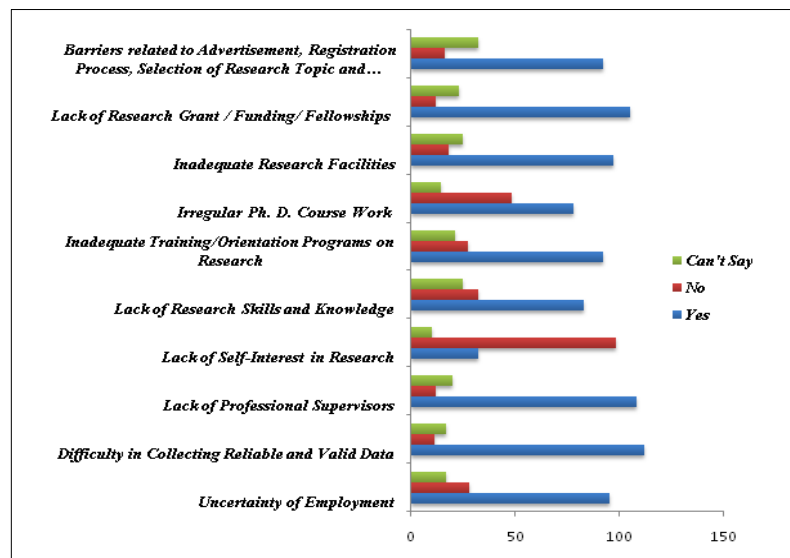
(Source: Author's illustration)

Fig. 3: Comparison of the Attitude between PG Students and Research Scholars



(Source: Author's illustration)

Fig. 4: Barriers to Conducting Research among the Research Scholars in West Bengal



(Source: Author's illustration)



**Ho.1** There exists no significant mean differences in the attitude of Post-Graduate Students and Research Scholars towards Research.

**Table 2: Comparison of the attitude between PG students and research scholars**

Group	N	Mean	SD	Difference	df	t-value	Remarks
PG Students	150	88.1	11.2	3.2	288	2.20	*Significant (at 0.05 level)
Research Scholars	140	84.9	13.4				

Source: Author

Table 2 and Fig. 3 show that the mean score of PG students' attitude was 88.1, whereas the mean score of Research Scholars attitude was 84.9 and showed the difference of 3.2. The calculated value of 't' obtained was 2.20, which was greater than the table value of 't' at df 288. It is significant at 0.05 level. Hence, the null hypothesis was rejected. This means that there exist significant differences in the attitude of Post-Graduate students and Research Scholars towards Research.

### **3.2 Comparison of the Attitude Level of the Post-Graduate Students towards Research in Relation to Their Gender, Locality, Stream and Types of institutions:**

**Ho.2** There exists no significant mean differences in the attitude of Post-Graduate Students towards Research with respect to their Gender, Locality, Stream and Types of institutions.

Table 3 shows that the mean score of male PG Students attitude was 91.7, whereas the mean score of female PG Students attitude was 87.7 and shows the difference of 4. The calculated value of 't' obtained was 2.27, which is greater than the table value of 't' at df 148. It is significant at 0.05 level. Hence, the null hypothesis was rejected. This means that there exist significant differences in the attitude of male PG Students and female PG Students towards Research.

**Table 3: Comparison of the attitude level of the PG students in relation to their gender, locality, stream and types of institutions**

Category	Group	N	Mean	SD	Difference	df	t-value	Remarks
Gender	Male	72	91.7	10.2	4	148	2.27	*Significant (at 0.05 level)
	Female	78	87.7	11.8				
Locality	Rural	84	91.2	10.3	2.5	148	1.45	Not Significant
	Urban	66	88.7	10.6				
Stream	Social Science	92	90.4	10.5	4.1	148	2.51	*Significant (at 0.05 level)
	Science	58	87.3	9.3				

Source: Computed by the author

On the other hand, the mean score of rural area PG students' attitude was 91.2, whereas the mean score of urban area PG students' attitude was 88.7 and shows the difference of 2.5. The calculated value of 't' obtained was 1.45, which is lower than the table value of 't' at df 148. It is not significant at 0.05 level and 0.01 level. Hence, the null hypothesis was accepted. This states that there exist no significant differences in the attitude of rural area PG students and urban area PG students towards Research.

Table 3 also shows that the mean score of PG Social science students' attitude was 90.4, whereas the mean score of PG science students' attitude was 87.3 and shows the difference of 4.1. The calculated value of 't' obtained was 2.51, which is greater than the table value of 't' at df 148. It is significant at 0.05 level. Hence, the null hypothesis was rejected. This indicates that there exist significant differences in the attitude of PG Social science students and PG science students towards Research.

### ***3.3 Comparison of the Attitude Level of the Research Scholars towards Research in Relation to Their Gender, Locality, Stream and Types of institutions:***

**Ho.3** There exists no significant mean differences in the attitude of Research Scholars towards Research with respect to their Gender, Locality, Stream and Types of institutions.

Table 4 shows that the mean score of male Research Scholars attitude was 87.9, whereas the mean score of female Research Scholars attitude was 90.2 and shows the difference of 2.3. The calculated value of 't' obtained was 1.23, which is lower than the table value of 't' at df 138. It is not significant at 0.05 and 0.01 levels. Hence, the null hypothesis was accepted. This states that there exist no significant differences in the attitude of male Research Scholars and female Research Scholars towards Research.

**Table 4: Comparison of the Attitude Level of the Research Scholars in Relation to Their Gender, Locality, Stream and Types of Institutions**

Category	Group	N	Mean	SD	Difference	df	t-value	Remarks
Gender	Male	62	87.9	11.2	2.3	138	1.23	Not Significant
	Female	78	90.2	10.7				
Locality	Rural	83	91.2	12.1	4.1	138	2.01	*Significant (at 0.05 level)
	Urban	57	87.1	11.7				
Stream	Social Science	87	87.1	10.3	4.3	138	2.16	*Significant (at 0.05 level)
	Science	53	91.4	12.1				

Source: Computed by the author

On the other hand, the mean score of rural area Research Scholars attitude was 91.2, whereas the mean score of urban area Research Scholars attitude was 87.1 and shows the difference of 4.1. The calculated value of 't' obtained was 2.01, which is greater than the table value of 't' at df 138. It is significant at 0.05 level. Hence, the null hypothesis was rejected. This states that there exist significant differences in the attitude of rural area Research Scholars and urban area Research Scholars towards Research.

Table 4 also shows that the mean score of Social Science Research Scholars attitude was 87.1, whereas the mean score of Science Research Scholars attitude was 91.4 and shows the difference of 4.3. The calculated value of 't' obtained was 2.16, which is greater than the table value of 't' at df 138. It is significant at 0.05 level. Hence, the null hypothesis was rejected. This states that there exist significant differences in the attitude of Social Science Research Scholars and Science Research Scholars towards Research.

### 3.4 Comparison of the Awareness of the Research Scholars about Research Methodology in West Bengal with respect to Their Stream i.e. Social Science & Humanities and Science:

**Ho.4** There exist no significant mean differences in the awareness of Research Scholars towards Research with respect to their stream i.e. Social Science & Humanities, and Science.

Table 5 interprets that the between groups mean square was 300.1, whereas the within groups mean square was 211.7. The calculated value of 'F' obtained was 1.41, which was lower than the critical value of 'F' and 'p' value was 0.24. That means it is significant at 0.05 level of significance. Hence, the null hypothesis was rejected. This states that there exist significant differences in the awareness of the Research Scholars about research methodology with respect to their stream i.e. Social Science & Humanities and Science.

**Table 5: Comparison of the awareness of research scholars towards research methodology with respect to their stream i.e. Social Science & Humanities and Science**

ANOVA: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Social science	54	1273	23.6	541.2		
Arts & Humanities	33	610	18.5	5.2		
Science	53	1070	20.2	3.2		
ANOVA						
Source of Variation	Sum of Squares	df	Mean Square	F	P-value	F crit
Between Groups	600.2	2	300.1	1.41	0.24	3.06
Within Groups	29011.5	137	211.7			
Total	29611.7	139				

Source: Computed by the author

### 3.5 Exploring the Barriers to Conducting Research among the Research Scholars in West Bengal:

Table 6 and Fig. 4 reveal that despite having adequate self-interest among the research scholars in the higher education institutions in West Bengal in research (70%), the leading barriers to conducting research faced by them markedly included barriers related to advertisement, registration process, selection of research topic and selection of guide and evaluation of thesis (65.7%), lack of research funding (75%), inadequate research facilities (69.2%), lack of research skills and knowledge (59.2%), lack of professional supervisors (77.1%), difficulty in collecting reliable and valid data (80%) and uncertainty of employment after completion of Ph. D. Degree (67.8%).

**Table 6: Barriers to conducting research among the research scholars in West Bengal**

Items Related to Barriers	Yes N (%)	No N (%)	Can't Say N (%)
1. Barriers related to Advertisement, Registration Process, Selection of Research Topic and Selection of Guide and Evaluation of Thesis	92 (65.7)	16 (11.4)	32 (22.8)
2. Lack of Research Grant / Funding/ Fellowships	105 (75)	12 (8.5)	23 (16.4)
3. Inadequate Research Facilities	97 (69.2)	18 (12.8)	25 (17.8)
4. Irregular Ph. D. Course Work	78 (55.7)	48 (34.2)	14 (10)
5. Inadequate Training/Orientation Programs on Research	92 (65.7)	27 (19.2)	21 (15)
6. Lack of Research Skills and Knowledge	83 (59.2)	32 (22.8)	25 (17.8)

7. Lack of Self-Interest in Research	32 (22.8)	98 (70)	10 (7.1)
8. Lack of Professional Supervisors	108 (77.1)	12 (8.5)	20 (14.2)
9. Difficulty in Collecting Reliable and Valid Data	112 (80)	11 (7.8)	17 (12.1)
10. Uncertainty of Employment	95 (67.8)	28 (20)	17 (12.1)

Source: Computed by the author

#### 4.0 Findings:

The findings of this study are as follows -

- There existed significant difference in the attitude of Post-Graduate Students and Research Scholars towards Research. Post Graduate Students showed a more positive attitude towards Research than Research Scholars in West Bengal.
- There existed significant difference in the attitude of male PG Students and female PG students towards Research. Male PG students showed a more positive attitude towards Research than female PG Students.
- Though there existed no significant difference in the attitude of rural area PG students and urban area PG students towards Research, the PG students pursuing in rural universities have shown a little more positive attitude towards Research than the PG students belonging to urban university.
- There existed significant difference in the attitude of the PG students belonging to Social science & humanities streams and the PG students belonging to science stream towards Research. PG Social science & humanities students showed a little more positive attitude towards Research than PG science Students.
- Though there existed no distinctly significant difference in the attitude of male Research Scholars and female Research Scholars towards Research, female Research Scholars showed a more positive attitude towards Research than male Research Scholars.
- There existed significant difference in the attitude of the Research Scholars in rural universities and the Research Scholars in rural universities towards Research. The Research Scholars belonging to rural universities showed a more positive attitude towards Research than Research Scholars belonging to urban university.
- There existed significant difference in the attitude of Social Science & humanities Research Scholars and Science Research Scholars towards Research. The Research Scholars in science stream have shown a little more positive attitude towards Research than the Research Scholars in social science and humanities streams.
- The Research Scholars in social science & humanities have shown a little more positive awareness about research methodology than the research scholars in science stream.
- There existed significant difference in the awareness of the Research Scholars about research methodology with respect to their stream i.e. Social Science & Humanities and Science.
- Difficulty in collecting reliable and valid data, lack of professional supervisors, lack of research grant or funding or fellowships, inadequate research facilities, inadequate training/orientation programs on research are the first five dominant hurdles in research faced the research scholars in the universities in West Bengal. However, self-interest in research among them is highly noticeable.

#### 4.1 Recommendations and Conclusion:

Once again, it can be reiterated that development of a nation and quality life its people largely rest on the quality research associated with quality education. To this effect, a sound understanding about research methodology and methods is essentially required for students at the Post-Graduate level and research scholars in the higher education institutes. The development of positive attitude towards research among them is also highly necessitated for quality research outcomes.

Considering all the findings of the study, it can be inferred that the Post-Graduate students with more positive attitude towards research than Research Scholars in West Bengal hints at the metamorphosis of attitude taking place from PG level to Ph. D. Programme. Such type of attitudinal change among the research scholars occurs after the engagement with the domain of research doings and it thus comes after their movement from the theoretical phase into practice. The factors affecting change at the attitudinal level among the researchers should be taken into consideration in the interest of producing quality research outcomes.

Moreover, reflection of little more positive awareness about research methodology among the research scholars in social science & humanities groups than the researchers in science stream also indicates that during the PG Programmes in Science stream, the cognitive base on research methodology has not been properly built. Due to lack of sound theoretical knowledge and the application of research skills in the forms of dissertation, project or observation-based investigation during Master Degree Programme, the perception about research methodology of the researchers coming from the science stream is not on par with their counterparts. Lastly, another inference can be drawn from the findings on the barriers to conducting research amongst researchers that despite having self-interest in research among the research scholars, they face a number of constraints on the part of government, faculty and institution. So, a cumulative effort needs to be rendered for revamping as well as getting momentum in research arena which is the real hallmark of any higher education institute.

As a whole, the foremost suggestion is that there is a need to reform the curriculum at PG level with more weightage towards research methodology in all disciplines irrespective of streams. During the PG programme in all disciplines, research methodology should be included as compulsory paper in the curriculum. At the very outset of Ph. D. programme, Course Work should be organized with greater importance in line with the course curricula framed by the University Grants Commission (UGC). The faculty members of the universities should also be well-equipped with the theoretical knowledge about research methodology and its application skills. Higher education institutes as well as Central Government and State Governments should put greater emphasis on enhancement of research fellowship in terms of quantity and numbers. Each university should not only subscribe to a Plagiarism Software but be accessible to students and researchers for research purpose and also subscribe to a good number of Scopus and Web of Science indexed journals (Online or Print). Availability of the Statistical Package for the Social Sciences (SPSS Package) Software should be available at institutional level for analysing research data statistically and frequent organization of student-centric seminars and workshops should be taken into account for the purpose of arousing interest, motivation and orientation towards research. Teachers should act as a key agent of building positive attitude towards research among their students and researchers. Higher education institutions should duly assign supervisors and perform other administrative procedure related to research. Last but not the least, faculty members should encourage and inspire students to participate in innovative research and also in research publications in quality journals. For ensuring the employment opportunities after award of Ph. D. the higher education institutes have to diminish the gap of mismatch between demand and supply in research. Research in social sciences, sciences and humanities must contribute to sustained growth of the society by generating new knowledge.

## References:

- Banerjee, S. (2018). *Gabeshana: Prakaran O Paddhati – A Bengali Book on Research Methodology*. Kolkata: Dey's Publishing.
- Creswell, J. W. (2012). *Educational Research Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4<sup>th</sup> Ed.). New York: Pearson Education.
- Deka, D., Misra, A., & Patel, H. (2015). Attitudes of Post Graduate Students towards Research. *International Human Research Journal, (Online Interdisciplinary-Quarterly)*, Volume-III, Issue-I, Jan-March 2015. Retrieved from [www.researchgate.net › publication › 322419441\\_ATTT...](http://www.researchgate.net/publication/322419441_ATTT...)
- Government of India (1950). *Report of the University Education Commission (1948-49)*. Delhi: Government of India.
- Government of India (1986). *National Policy on Education, 1986*, New Delhi: MHRD, Department of Education, Govt. of India.
- Government of India (1966). *Education and National Development: Report of the Education Commission of India (1966)*. New Delhi: Ministry of Education, Government of India.
- Kini, S., Muthukumar, R., Maiya, R. G., Nishanth, K., & Kiran, N. U. (2017). Attitudes and Perceptions towards Research among Final Year Medical Students in a Private Medical College of Coastal Karnataka: A Cross-Sectional Study. *Nitte University Journal of Health Science*, 7, (1): 7-11.
- MHRD (2019). *All India Survey on Higher Education (AISHE)*. New Delhi: MHRD, GOI.
- MHRD (2019a). *Draft National Education Policy 2019*. New Delhi: MHRD, Govt. of India.
- Mondal, A. & Mete, J. (2013). Higher Education and Quality Research in India: An Overview, *University News – A Weekly Journal of Higher Education*, 51, (19): 3-10.
- Neuman, W. L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches* (7<sup>th</sup> Ed.). London: Pearson Education Limited.
- Ross, R. (1974). *Research: An Introduction*. New York: Barnes and Nobles.
- Roul, R. (2018). Attitude of Post-Graduate Students towards Research. *Research Guru: Online Journal of Multidisciplinary Subjects*, 12, (2): 557-570.
- Sarin, S. & Dholakia, N. (2016). *Higher Education in India at a Crossroads: The Imperative for Transcending Stagnation and Embracing Innovation*. In R. V. Turcan et al. (eds.), (Re) Discovering University Autonomy. Netherlands: Springer.
- Shah, H. T., & Purani, J. P. (2014). A Study of the Attitude of P.G. Students towards Research. *Recent Trends -International Journal of Multidisciplinary Research*, Issue 1, May 2014, pp. 36-40.
- Singh, G. (2015). M. Ed. Students Attitude towards Research in Relation to Stream. *Online International Interdisciplinary Research Journal, (Bi-Monthly)*, Volume-V, Nov 2015 Special Issue, pp. 254-258. Retrieved from [www.oijr.org](http://www.oijr.org) › oijr › nov2015-special-issue.
- Singh, G., & Kaur, G. (2015). M.Ed. Students Attitude towards Research in Relation to Type of College. *International Journal of Informative & Futuristic Research*, 3, (2): 321-326. Retrieved from [www.ijifr.com](http://www.ijifr.com) › pdfsave › 09-10-201527V3-E2-001
- Sureshkumar, K. (2015). Attitude towards Research among M. Ed Students. *International Journal of Multidisciplinary Research and Development*, 2, (8): 85-87.
- UGC (2003). *Higher Education in India: Issues, Concerns and New Directions*. New Delhi: University Grants Commission (UGC).
- UGC (2011). *Inclusive and Qualitative Expansion of Higher Education – 12<sup>th</sup> Five Year Plan, 2012-2017*. New Delhi: University Commission (UGC).
- UGC (2019). *Improving the quality of research by faculty and creation of new knowledge and strategies for improving research culture in colleges and universities (Report of the committee constituted by UGC. July, 2019)*. New Delhi: University Grants Commission (UGC).
- UGC (2011). *Inclusive and Qualitative Expansion of Higher Education: 12<sup>th</sup> Five-Year Plan, 2012-17*. New Delhi: University Grants Commission (UGC).
- Vairamani, C. R. & Akoijam, B. S. (2018). Knowledge, Attitude and Perceived Barriers towards Conducting Research among Students in a Medical College, India. *International Journal of Community Medicine and Public Health*, 5, (2):806-810.