

ATTITUDE TOWARDS RESEARCH AND STATISTICAL COMPETENCY AMONG M.ED. STUDENTS

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ABSTRACT

The purpose of this study to attitude towards research and statistical competency among M.Ed. Students. The sample comprises 80(40 male & 40 female) M.Ed. students. Statistical competency test by P. Govil, M.A.N. Qasem and S. Gupta & Attitude scale towards research by Vishal Sood and Y. K. Sharma were employing to compare Attitude scale towards research& Statistical competency. Collected data was analyzed by employing SD and t test. Findings of the present study are showing that male and female M.Ed. students' different attitude towards research but same attitude towards statistical competency.

Keywords: Attitude, Research, Statistical Competency and M.Ed. Students.

INTRODUCTION

Education is a lifelong process it is never ending. It starts with the birth of on individual and then it goes on till the last day of the individual a real human being. It is an assent human virtue. Man becomes man through education. Education research is a disciplined inquiry possessing a texture that displays the raw material entering into the arguments and the processes by which the raw materials are transformed compressed and rearranged to make the conclusions credible. Such a disciplined inquiry process must be acceptable and open to judgments about the transformations. Basically, educational research is concerned with the improve men of educational practices and the discovery of effective procedures to improve curriculum quality school quality instructional quality and the quality of educational outcome. The activity should therefore, focus on every aspect of education including improving teachers method of teaching improving assessment procedures, improving students methods of study improving the physical and academic environment of the school and improving the management and administration of educational resources. The successful undertaking of this

vital educational activity largely depends on the researcher's understanding of and ability to use appropriate methodologies including data analysis tool that are sensitive to the hierarchical nature of education data.

Attitude

Attitude is the basis for the achievement of anything in his/her life. The concept of attitude has been defined variably. Thurston defines as Attitude denotes the sum total of a man's motivations, and feeling, prejudice bias preconceived notions ideas fears threats, and convictions about any specific topic.

According to **Freeman** an attitude is a dispositional readiness to respond to certain situations persons or objects in a consistent manner which has been learned and has a well-defined object a reference. For example, one's views regarding a class of food or drink sports math are democrats are attitude. **Anzcanesthetic** stated an attitude is often defined as a tendency to react favorably or unfavorably to racial group a custom arena institution. This defined attitude cannot be directly observed but must be inferred from overt behavior both verbal and non-verbal.

Research

Research in India is of fairly recent origin. This is not surprising because the study of education as a subject at the university did not begin seriously until the forties. As compared to the science and humanities however. Education has not formed a significant part of academic life in a university. In this respect it has followed the path of other professional subjects like medicine, engineering and law. But unlike this education has not grown in status and organization and what is worse, has failed to develop on identify of its own. It has reminded very much a teacher training program. It is against this background that one has to judge educational research and one will not perhaps in that case view very unfavorably the little that has been done in educational research in India. Indifferent, attempts have been made to measure teaching aptitude and student's achievement in various grades and subjects and to prepare some measuring devices. It is however worth noting that there is evidence of some good research.

John W. Creswell (2008), who states that "research is a process of steps used to collect and analyze information to increase our understanding of a topic or issue". It consists of three steps: pose a question, collect data to answer the question, and present an answer to the question.

The Merriam-Webster Online Dictionary (2018) defines research in more detail as "studious inquiry or examination; *especially*: investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws".

STATISTICS

The word statistics is derived from a latten term status which meant state. In old times numerical records were maintained regarding the divisions of the state their respective population birth rate income etc. The word statistics was used for the first time by a German mathematician Gottfried Ache wall in 1749. The term statistics refers to numerical description of quantitative aspects of things. These descriptions may take the form of counts or measure mints.

Statistics is a science that deals with the collection organization, Presentation, analysis and interpretation of numerical data. Valid conclusions can be drawn only from the adequately collected data. Organization of data is the task of presenting the collected measurements or counts in a form suitable for obtaining logical conclusions. Presentation of data is their placement in the form of table diagrams or various types of graphs in some suitable form.

Analysis of data means computation of their means and the digress of variation in and among them etc. In the process of analysis data are categorized into useful and relevant divisions. Cause effect relation between various types of data and the inferences but forth by the analysis which the data put on the surface. Interpretation promotes generalization and formulation of a theory and also provides answer to the question being looked into. Thus, when statisticians use the word statistics, they are referring to a set of methods and procedures that help present characterize and interpret observations.

Dodge, Y. (2006) Statistics is a branch of mathematics dealing with data collection, organization, analysis, interpretation and presentation.

In short statistics can be defined as the science of organizing describing and analyzing data.

COMPETENCY

Competency means capability. Although we use it to mean someone has a sufficient qualification, it comes from the word compete, meaning that someone with competency is good enough to compete with other candidates. If you pass the medical board exams, then you have

medical competency. Most jobs require that you show competency, either through certification, or on the job performance.

STATISTICAL COMPETENCY

It is very important for medical professionals and medical researchers to be literate in statistic. However, we have found that degree of literacy that is required should not be identical for every statistical competency or even for every learner. We first begin by describing why the development, teaching, and assessment of statistical competency for medical professionals and medical researchers are critical tasks we next review our three substantial efforts at developing a comprehensive list of statistical competencies that can be used as a guide for what medical research learners should know about statistics, for curricula development and for assessment of statistical education. We then summarize the origin and the inclusion of the statistical competency items. We follow this with a description of potential user and applications of the statistical competencies to improve targeted learning for medical research learners. Finally, we discuss implication of the statistical competency for undergraduate statistical education.

NEED OF STUDY

Research is the heart of teaching and learning process. The demands of the education sector are changing with the passage of time. The needs of the society are also changing. Research in education is now becoming to bridge the gap between the society and education the research abilities and statistical competency is very necessary among the learners to do research on major issues related to education and find its solution.

OBJECTIVES

1. To study of attitude towards research among M.Ed. students.
2. To study of attitude towards statistical competency among M.Ed. students.

HYPOTHESES OF STUDY

1. There is no significant difference of attitude towards research among M.Ed. male and female students.
2. There is no significant difference of attitude towards statistical competency among M.Ed. male and female students.

SAMPLE OF THE STUDY

For the present study 80 secondary school students was taken randomly from the Moga District. The sample was be bifurcated into male and female M.Ed. students.

TOOLS TO BE USED

In order to collect the data, following tools used:

1. Statistical competency test by P. Govil, M.A.N. Qasem and S. Gupta.
2. Attitude scale towards research by Vishal Sood and Y. K. Sharma.

METHOD OF STUDY

Descriptive survey method was use for this study.

STATISTICAL TECHNIQUES TO BE USED

Data was analyzed by using descriptive technique like Mean, Median, Standard Deviation and t value where required.

DELIMITATIONS OF STUDY

1. Study was confined in Moga district.
2. Study was conducted on 80 M.Ed. students.
3. Study was conducted on 40 urban male and female M.Ed. students & 40 urban male and female M.Ed. students.

VERIFICATION OF HYPOTHESES

Hypothesis1. There is no significant difference of attitude towards research among M.Ed. male and female students.

Table 1.1**Difference of attitude towards research among M.Ed. male and female students**

Attitude towards research Dimensions	Male			Female			t test	df	Level of significance at 0.05
	N	M	SD	N	M	SD			
General aspect at research and research process	40	44.9	7.47	40	45.52	8.35	0.35	78	Not significant
Usefulness of Research in Professional Career	40	32.42	8.10	40	38.75	8.96	3.33	78	significant
relevance of research in personal-social life	40	39.97	9.03	40	38.62	7.03	0.75	78	Not significant
difficulties in research and anxiety	40	36.17	8.21	40	38.4	9.12	0.59	78	Not significant
Total	40	152.72	17.02	40	160.5	14.20	2.22	78	significant

The table 1.1 shows the mean score, standard deviation and t value of attitude towards research among M.Ed. male and female students. For General aspect at research and research process the table reveals mean score for male students 44.9 and SD is 7.47 & for female mean score is 45.52 and SD is 8.35. t value is 0.35 which is not significant at the level of 0.05. For Usefulness of Research in Professional the table reveals mean score for male students 32.42 and SD is 8.10 & for female mean score is 38.75 and SD 8.96. t value is 3.33 which is significant at the level of 0.05. For relevance of research in personal-social life the table shows mean score for male students 39.97 and SD is 9.03 & for female mean score is 38.62 and SD is 7.03. t value is 0.75 which is not significant at the level of 0.05. For difficulties in research and anxiety the table reveals mean score for male students 36.17 and SD is 8.21 & for female mean score is 38.4 and SD is 9.12. t value is 0.59 which is not significant at the level of 0.05. For attitude towards research the table reveals mean score for male students 152.72 and SD is 17.02 & for female mean score is 160.5 and SD is 14.20. t value is 2.22 which is significant at the level of

0.05 therefore the hypothesis, “There is no significant difference of attitude towards research among M.Ed. male and female students” is accepted.

Hypothesis 2. There is no significant difference of attitude towards statistical competency among M.Ed. male and female students.

Table 4.2
Difference of attitude towards statistical competency among M.Ed. male and female students

Statistical competency	Male			Female			t test	df	Level of significance at 0.05
	N	M	SD	N	M	SD			
Understanding of basic statistical concepts	40	7.32	1.14	40	8.1	1.66	2.51	78	significant
Interpretation of descriptive statistics	40	6.67	0.72	40	6.72	1.13	0.23	78	Not significant
Measuring & interpreting the coefficient of correlation	40	6.45	0.78	40	6.55	1.01	0.50	78	Not significant
Use of various parametric methods	40	4.17	0.67	40	4.25	0.74	0.06	78	Not significant
Use of various non-parametric methods	40	3.85	0.57	40	4.05	0.78	1.33	78	Not significant
Explaining the results given the High statistical programs as SPSS etc.	40	5.07	0.97	40	4.72	0.90	1.75	78	Not significant
Selecting the appropriate statistical method in	40	3.57	1.10	40	3.07	1.18	0.26	78	Not significant

acoordance with the problems									
Total	40	37.1 2	3.02	40	37.4 2	3.60	0.40	78	Not significant

The table 1.2 shows the mean score, standard deviation and t value of school environment among male and female adolescents. For Understanding of basic statistical concepts, the table reveals mean score for male students 7.32 and SD is 1.14 & for female mean score is 8.1 and SD is 1.66. t value is 2.51 which is significant at the level of 0.05. For Interpretation of descriptive statistics, the table reveals mean score for male students 6.67 and SD is 0.72 & for female mean score is 6.72 and SD is 1.13. t value is 0.23 which is not significant at the level of 0.05. For Measuring & interpreting the coefficient of correlation the table reveals mean score for male students 6.45 and SD is 0.78 & for female mean score is 6.55 and SD is 1.01. t value is 0.50 which is not significant at the level of 0.05. For Use of various parametric methods, the table reveals mean score for male students 4.17 and SD is 0.67 & for female mean score is 4.25 and SD is 0.74. t value is 0.06 which is not significant at the level of 0.05. For Use of various non-parametric methods, the table reveals mean score for male students 3.85 and SD is 0.57 & for female mean score is 4.05 and SD is 0.78. t value is 1.33 which is not significant at the level of 0.05. For explaining the results given the High statistical programs as SPSS etc. The table reveals mean score for male students 5.07 and SD is 0.97 & for female mean score is 4.72 and SD is 0.90. t value is 1.75 which is not significant at the level of 0.05. For Selecting the appropriate statistical method in accordance with the problems the table reveals mean score for male students 3.57 and SD is 1.10 & for female mean score is 3.07 and SD is 1.18. t value is 0.26 which is not significant at the level of 0.05. For Statistical competency the table shows mean score for male students 37.12 and SD is 3.02 & for female mean score is 37.42 and SD is 3.60. t value is 0.40 which is not significant at the level of 0.05 therefore the hypothesis, "There is no significant difference of attitude towards statistical competency among M.Ed. male and female students" is rejected.

MAJOR FINDINGS AND CONCLUSIONS OF THE STUDY

The following were the major findings of the present study

1. There is significant difference found among attitude of M.Ed. male and female student's towards research.
2. There is no significant difference found among M.Ed. male and female students towards statistical competency.

EDUCATIONAL IMPLICATIONS

The present study is helpful for M.Ed. students:

1. M.Ed. students should make new strategies to develop attitude towards research.
2. M.Ed. students should make new strategies to develop statistical competency.
3. The present study tells us how M.Ed. students can motivate achieve success in their life.

SUGGESTIONS FOR FURTHER RESEARCH

1. The present study is delimited to a sample of 80 M.Ed. students. It is suggested that the study can be conducted on a large sample to obtain more reliable results.
2. The present study is conducted in the education colleges students. It can be studied at a state or national level.
3. The present study is undertaking sample from M.Ed. students. This study can be further extended to B.A. & M.A. level.

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