

# Scientific Temper among Secondary School Students with Respect to Their Gender

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**Abstract:** *The main aim of this research was to investigate the Scientific Temper among Secondary School Students with respect to their gender. The research method was descriptive and its type was survey study. The sample included 100 Secondary School Students in Shimla district selected by the random sampling technique. Singh (1998) questionnaire was used to test the Scientific Temper of students. T-test was used to compare the Scientific Temper of Male and Female Secondary School Students. The findings of the study showed a significant difference on Scientific Temper with respect to Gender. The study revealed that Male Students have high scientific Temper than Female students.*

**Keywords:** Scientific Temper, Secondary School Students, Survey study, Random sampling technique, Gender.

## 1. Introduction

Scientific Temper demands a change in belief, traditions, customs, in terms of empirical facts and logical criteria. Scientific Temper in simple terms is one's reaction towards his/her life situations in a scientific way. It is a dynamic device to minimize exploitation and enables one to question high priests-to minimize authoritarianism and to either the estate of Science-criticism, even self-criticism for self-reliance through innovation. Rajammal (2003) investigated the efficiency of in service training in developing Scientific Temper among primary children. It was found that pre and post-test score of primary teacher differ significantly in respect to achievement in Science and Scientific Temper. It was also revealed from study that Boy and Girls achieve more in post-test than pre-test on achievement and Scientific Temper. Andrabi (2015) investigated Scientific Temper, Emotional Intelligence, and Academic Achievement among tribal and non-tribal adolescents of Kashmir. It was found that tribal and non-tribal adolescents differed significantly with respect to Scientific Temper, Emotional Intelligence, and Academic Achievement but there was no significant difference between male and female adolescent students on Scientific Temper. Joshua (2015) studied the effectiveness of a Scientific Temper Package on certain cognitive and affective variables of students at secondary level. It was found that Scientific Temper package was effective on certain cognitive and affective variables of students. It was also revealed that boys had higher Scientific Temper than girls

## 2. Review of Related Literature

Anboucarassy (2010) determined the effectiveness of multimedia in teaching Biological science to IX<sup>th</sup> class students. Multimedia package to teach Biology for IX<sup>th</sup> class was developed by investigator himself. The findings of the study revealed that achievement scores of experimental group were higher than the mean of the controlled group.

Aezum and Wani (2013) studied and compared the Scientific Temper and Academic Achievement of adolescents in the Anantnag district of Jammu & Kashmir. The findings of the study revealed that the Scientific Temper and Achievement of the boy and girl students, as well as the students from rural and urban areas and from government and private institutions, differed significantly. Boys were found to be a more efficient scorer than girls.

Andrabi (2015) investigated Scientific Temper, Emotional Intelligence, and Academic Achievement among tribal and non-tribal adolescents of Kashmir. It was found that tribal and non-tribal adolescents differed significantly with respect to Scientific Temper, Emotional Intelligence, and Academic Achievement but there was no significant difference between male and female adolescent students on Scientific Temper.

Kapri (2017) investigated a study of the Scientific Temper and Scientific Creativity of Secondary School Students. It was found that boys and girls of Senior Secondary Schools were equal on their Scientific Temper but the girls were found better in Scientific Creativity in comparison to the boys of these schools. It was also reported that there exists a significant correlation between the Scientific Temper and Scientific Creativity of Senior Secondary Science Students.

Selvanayahi and Prabhu (2018) conducted a study of Scientific Attitudes and Attitude towards Zoology laboratory activities of Higher Secondary Students. Results revealed that there is a significant difference between Boys and Girls Higher Secondary Students. It was found that girls possess more Scientific Attitude and Attitude towards Zoology laboratory activities than boys Higher Secondary Students.

## 3. Problem Definition

Scientific Temper among Secondary School Students with respect to their Gender.

## 4. Methodology

### 4.1 Objective of the study

To study the Scientific Temper among Secondary School Students with respect to Gender.

### 4.2 Hypothesis of the study

There will be no significant difference in mean scores of Male and Female Secondary School Students on Scientific Temper.

### 4.3 Research method

For conducting the present study, the investigator used a survey study, a type of descriptive survey method to collect the data.

### 4.4 Sample and sampling technique

In the present study, 100 students from five Secondary Schools of Shimla district of Himachal Pradesh constituted the sample of the study. Out of Twelve districts of Himachal Pradesh, Shimla district was selected based on a random sampling technique. From the Shimla district, five schools will be selected by purposive sampling. The sample of the students was drawn randomly from IX<sup>th</sup> grade.

### 4.5 Variables of the study

For the present investigation, Teaching through Scientific Temper was taken as Independent variables and Gender was taken as dependent variables.

### 4.6 Tools used for data collection

For collecting desired data for the present study, a questionnaire prepared by Singh (1998) was used.

### 4.7 Statistical technique applied

The statistical measures such as Mean, S.D., and t-test were applied to analyze the obtained raw scores for testing the hypotheses and drawing the inferences.

## 5. Results & Discussion

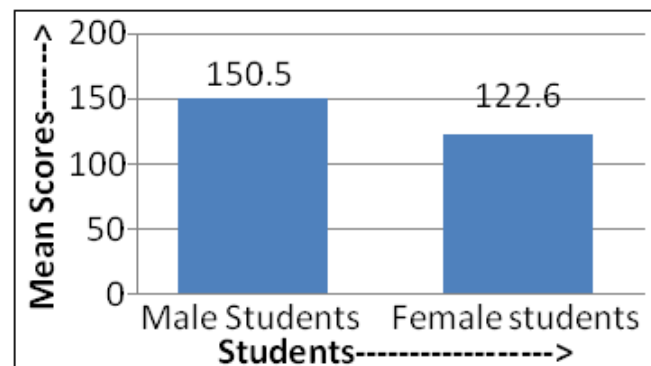
This section presents the details of the analysis and interpretation to highlight the significance of the difference between mean scores of Male and Female Secondary School Students on Scientific Temper.

**Table 1:** 't' value showing the significance of difference between mean scores of Male and Female Secondary School Students on Scientific Temper

Group	Number	Mean	S.D.	t-test	Level of Significance
Male	50	150.50	9.03	2.03	Significant at 0.05 level
Female	50	122.60	10.30		

\* 't' value at 0.05 level of significance with  $df_{98} = 1.98$

It is evident from Table-1 that 't' values showing the significance of difference between mean scores of Male and Female Secondary School Students on Scientific Temper came out to be 2.03. Thus, the null hypothesis which states that "There will be no significant difference in mean scores of Male and Female Secondary School Students on Scientific Temper" stands rejected.



**Figure 1:** Mean scores of Male and Female Secondary School Students on Scientific Temper

Therefore, the inference can be drawn from figure-1 that Male and Female secondary School students differ significantly on scientific temper. Further, on the basis of mean scores (Table-1), it is clear that Male Secondary School Students possess more Scientific Temper than Female Secondary School Students.

This finding is partly supported by the researches of Joshua, 2015; Amintarti *et.al.*, 2018; who found that the Male Secondary Students possess higher Scientific Temper than Female Secondary School Students. However, our results are in contradiction to the results of Kapri 2017, who found Female Students possess more Scientific Temper than Male students.

## 6. Conclusion

It was concluded that Male Secondary School Students have high Scientific Temper than Female Secondary School Students. The reason for high Scientific Temper shown by Male students is habit of coming to conclusions in light of evidences, reasons and logics.

## 7. Future Scope

In view of our findings, future scopes are as follows:

The study helps to facilitate understanding students learning tendencies towards Science.

The study helps to enhance the use of technology supported learning methodology for all-round development of students and enhance their Scientific Temper.

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## Author Profile



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