# SOCIAL INTELLIGENCE, SCIENTIFIC TEMPER AND THE ACADEMIC ACHIEVEMENT OF CHILDREN OF WORKING AND NON-WORKING MOTHERS OF KASHMIR: A COMPARATIVE STUDY.

Urfan Ahmad Dar
*Research Scholar, Department of Continuing Education & Extension, Barkatullah University Bhopal, M.P, India.*
E-mail of the corresponding author: zahid.irfan32@gmail.com

Prof. Asrar-ul Ghani
*Head of the Department of Education N.S.E College Hoshangabad, M.P*

## Abstract

*This study was undertaken to study the social intelligence, scientific temper and the academic achievement of children of working and non-working mothers of Kashmir. The sample for the study was 400 including 200 children of working mothers and 200 children of non-working mothers by using random sampling technique. N. K. Chadha and Usha Ganesan Social Intelligence Scale (1986) N.A Nadeem's and Showket Rashid's scientific temper scale were administered for the collection of data. The result of the study highlighted that there exists no significant difference between children of working and non-working mothers of Kashmir on social intelligence and scientific temper. On the other hand it has been found that children of non-working mothers were having similar academic achievement.*

**Key words:** *social intelligence scientific temper, academic achievement, children of working and non-working mothers.*

## Introduction

The issue of understanding the behavior of individuals in "person perception" of "empathy" of "social sensitivity" and "face to face contacts", and issues of impacting or dealing with the behavior of others have been identified for a long time, but very few systematic works have been done on basic understanding of those phenomena. Thorndike featured (1920) that there is a prospect of identity that can be called social intelligence, unique in relation to abstract and concrete intelligence. Guilford (1958) highlighted that social intelligence could be considered as a fourth category of information. In social intelligence, there are 30 capacities required as indicating the implication of structure of intellect (SI) theory, among these six capacities, are managing different results of products of information within each of the five operation categories.

Since the publications began appearing in the twentieth century Social Intelligence has become a familiar topic of interest with the works of Edward Thorndike (1920). "Social intelligence itself shows largely in the nursery, in barracks and factories and salesrooms, on the playground, but it puts off the formal standardized state of the testing laboratory." As observed by Thorndike, the psychologist of Columbia University who firstly elaborated the concept in Harper's Monthly Magazine. He suggested that such interpersonal effectiveness was of vital

importance for success in various fields, especially leadership. He cited that the best specialist in a production line may flop as a foreman for the absence of social intelligence.

Well has been said that cutting edge age is the period of data and innovation. It is because of the enormous undertakings and persevering endeavors of the person that has made him to contact the radiant platform. The premise of this conviction is the incredible logical accomplishments of the present age. Man has arrived on the moon. A few satellites are circling around the earth. Man has in reality turned into a traveler in space. Incredible steps have been made in the field of science. One may reasonably be pleased that India has the third biggest number of researchers on the planet today. However as I would see it is a misstep to call this age or so far as that is concerned any age as a logical age. Just based on the mass of logical information an age does not have the right to be known as a logical age. Likely when it is said that we live in a logical age, it is implied that in our age there has been a strengthening of request and a speeding up of disclosures and creations. One can likewise say that the present age is a time of high innovation. Logical temper is a lifestyle of an individual and social procedure of reasoning and acting-which utilizes a logical technique, which may incorporate addressing, watching, physical reality, testing, speculating, investigation and communicating(not important in a specific order). Pt. Jawaharlal Nehru was one of the fundamental whose use the term intelligent temper and sponsor the progression of sensible temper. What is required is the coherent temper approach, the strong however then essential temper of science, the investigation of truth and new data, they would not recognize anything without testing and trademark, the capacity to change past finishes even with new confirmation, the reliance on watched assurance and not on pre-envisioned speculation, the hot request of the mind-this is indispensable, not just from the utilization of science but instead everlastingly itself and the game plan of its various issues".

Academic achievement has been variously defined: as level of proficiency attained in academic work or as formally acquired knowledge in school subjects which is often represented by percentage of marks obtained by students in examinations Kohli (1975). Academic achievement of students refers to the knowledge attained and skills developed in the school subjects. So, academic achievement means the achievement of students in the academic subjects in relation to their knowledge attaining ability or degree of competence in school tasks usually measured by standardized tests and expressed in grades or units based on pupil`s performance. Sinha (1970) explains it as "students whose academic performance is superior in character in the form of high percentage of marks are taken as successful candidates. On the other hand, students who fail in the previous examination and obtained low divisions in their examination are considered as individuals who are failed in their attainments.

Working mother in the present study shall refer to women, having children, who work outside or inside the home and is engaged in 6 hours in a day and are engaged in any Government or Semi-Government or Private Salaried job.
Non-working mother in the present study shall refer to women having children and are not in the workforce and works only as housewives.

**OBJECTIVE**

1. To explore the differences, if any, in Social Intelligence and its dimensions, Scientific Temper and its dimensions and Academic Achievement between children of Working and Non-Working Mothers of Kashmir.
2. To examine the relationship of Social Intelligence and its dimensions, Scientific Temper and its dimensions with Academic achievement among children of Working Mothers and Non-Working Mothers of Kashmir.

**Hypotheses**

$H_0$, **1** There is no significant difference in the mean scores of Social Intelligence and its dimensions between children of Working and Non-Working Mothers of Kashmir.

$H_0$, **2** There is no significant difference in the mean scores of Scientific Temper and its dimensions between children of Working and Non-Working Mothers of Kashmir.

$H_0$, **3** There is no significant difference in the mean scores of Academic Achievement between children of Working and Non-Working Mothers of Kashmir.

$H_0$, 4 there will be a positive relationship of social intelligence and its dimensions with academic achievement of children of working and non-working mothers of Kashmir.

$H_0$, 5 there will be a positive relationship of scientific temper and its dimensions with academic achievement of children of working and non-working mothers of Kashmir.

**Methods and procedure:**

This study was designed to study social intelligence, scientific temper and the academic achievements of children of working and non-working mothers of Kashmir. The present investigation was conducted only to the students studying in high and higher secondary schools. As such, descriptive method of research was employed. The sample for this study was collected from 10 High and Hr. Sec. Schools of district Bandipora and Baramulla (J&K). The sample consisted of 400 students of which 200 children of working and 200 children of non-working mothers. The sample has been selected on the basis of random sampling technique.

**Tools used:**
**The following tool was employed for the purpose of collecting data from the selected subjects:**

1. N. K. Chadha and Usha Ganesan Social Intelligence Scale (1986)
2. Nadeem's and Showket Rashid's Scientific Temper Scale was administered on the sample subjects to measure their study habits.
**3.** To measure the academic achievement, aggregate marks obtained by the subjects in classes were taken as their academic achievement.

**Statistical treatment:**
The data collected was subjected to the following statistical treatment:
Mean S.D and t-test and Person's Coefficient of correlation (r) were used.

**Analysis and interpretation of data:**
In order to achieve the objectives formulated for the study, the data was statically analyzed by employing t-test and Coefficient Correlation.

**Table No. 1: Showing the mean comparison between children of working and non-working mothers of Kashmir on various dimensions of Social Intelligence.**

| Variables | Status | N | Mean | S.D | df | t.value | sig. |
|---|---|---|---|---|---|---|---|
| Patience | CWM of Kashmir | 200 | 17.99 | 3.312 | 398 | 0.601 | 0.548 |
| | CNWM of Kashmir | 200 | 17.79 | 3.346 | | | |
| Co-cooperativeness | CWM of Kashmir | 200 | 23.25 | 3.752 | 398 | 1.157 | 0.248 |
| | CNWM of Kashmir | 200 | 22.83 | 3.502 | | | |
| Confidence | CWM of Kashmir | 200 | 20.12 | 20.519 | 398 | 1.293 | 0.197 |
| | CNWM of Kashmir | 200 | 18.22 | 2.873 | | | |
| Sensitivity | CWM of Kashmir | 200 | 19.84 | 3.689 | 398 | 0.235 | 0.814 |
| | CNWM of Kashmir | 200 | 19.76 | 3.084 | | | |
| R-S-Env. | CWM of Kashmir | 200 | 1.19 | 0.833 | 398 | 2.262 | 0.024 |
| | CNWM of Kashmir | 200 | 1.01 | 0.802 | | | |
| Tactfulness | CWM of Kashmir | 200 | 3.36 | 1.487 | 398 | 2.387 | 0.017 |
| | CNWM of Kashmir | 200 | 2.98 | 1.691 | | | |
| Sense of humour | CWM of Kashmir | 200 | 2.62 | 1.465 | 398 | 0.097 | 0.922 |
| | CNWM of Kashmir | 200 | 2.6 | 1.61 | | | |
| Memory | CWM of Kashmir | 200 | 4.85 | 2.616 | 398 | 0.881 | 0.379 |
| | CNWM of Kashmir | 200 | 4.62 | 2.721 | | | |
| Total | **CWM of Kashmir** | **200** | **93.19** | **24.54** | **398** | **1.767** | **0.078** |
| | **CNWM of Kashmir** | **200** | **89.78** | **11.953** | | | |

(*0.05 and **0.01 levels of significance)

It is evident from table No. 1 that there exists no significant mean difference between children of working and non-working mothers of Kashmir on dimensions of patience, cooperativeness, confidence, sensitivity, sense of humour and memory as their calculated t-values are 0.60, 1.15, 1.29, 0.23, 0.09 and 0.88 respectively which is less than the tabulated value at 0.05 level of significance. However, the calculated t-values of dimensions of recognition of social environment (2.26) and tactfulness (2.38) are higher than the tabulated value at the 0.05 level of significance. Hence it can be interpreted that there exists a significant difference between children of working and non-working mothers of Kashmir on the dimensions of recognition of social environment and tactfulness. The results clearly reveal that children of working mothers of Kashmir are high recognition of social environment on (M=1.19) tactfulness on (M=3.36) than children of non-working mothers of Kashmir.

Further, the above table shows that social intelligence of children of working and non-working mothers of Kashmir does not differ significantly with each other as their calculated t- value is (1.76) which is less than the tabulated value at 0.05 of the level of significance. Therefore, the hypothesis which reads "there is no significant mean difference in social intelligence between children of working and non-working mothers of Kashmir" stands accepted.

**Table No. 2: Showing the mean comparison between children of working and non-working mothers of Kashmir on various dimensions of Scientific Temper.**

| Variables | Status | N | Mean | S.D | df | t.value | sig. |
|---|---|---|---|---|---|---|---|
| **Curiosity** | CWM of Kashmir | 200 | 6.34 | 1.884 | 398 | 0.028 | 0.978 |
| | CNWM of Kashmir | 200 | 6.34 | 1.67 | | | |
| **Open mindness** | CWM of Kashmir | 200 | 4.13 | 1.818 | 398 | 1.574 | 0.116 |
| | CNWM of Kashmir | 200 | 4.41 | 1.74 | | | |
| **Objectivity** | CWM of Kashmir | 200 | 6.09 | 2.233 | 398 | 2.632 | 0.009 |
| | CNWM of Kashmir | 200 | 6.63 | 1.852 | | | |
| **Rationality** | CWM of Kashmir | 200 | 4.88 | 1.925 | 398 | 0.56 | 0.576 |
| | CNWM of Kashmir | 200 | 4.99 | 1.822 | | | |
| **Av. to Sup.** | CWM of Kashmir | 200 | 2.94 | 1.812 | 398 | 0.203 | 0.839 |
| | CNWM of Kashmir | 200 | 2.98 | 1.624 | | | |
| **Total** | **CWM of Kashmir** | **200** | **24.37** | **6.914** | **398** | **1.506** | **0.133** |
| | **CNWM of Kashmir** | **200** | **25.34** | **5.857** | | | |

*(\*0.05 and \*\*0.01 levels of significance)*

It is evident from table No. 2 that there exists no significant mean difference between children of working and non-working mothers of Kashmir on the dimensions of curiosity, open-mindedness, rationality and aversion to superstitious as there calculated t-values are 0.02, 1.57, 0.56 and 0.20 respectively which is less than the tabulated value at 0.05 level of significance.

However, the calculated t-value on the dimension of objectivity (2.63) is higher than the tabulated value at the 0.05 level of significance. Hence it can be interpreted that there exists a significant difference between children of working and non-working mothers of Kashmir on the dimension of objectivity. The results clearly reveal that children of non-working mothers of Kashmir are high objectivity on (M=6.63) than children of working mothers of Kashmir. Further, the above table shows that scientific temper of children of working and non-working mothers of Kashmir does not differ significantly with each other as their calculated t- value is (1.50) which is less than the table value at 0.05 level of significance. Therefore, the hypothesis which reads "there is no significant mean difference in scientific temper between children of working and non-working mothers of Kashmir" stands accepted.

**Table No. 3: Showing the mean comparison between children of working and non-working mothers of Kashmir on various dimensions of Scientific Temper.**

| Variables | Status | N | Mean | S.D | Df | t.value | sig. |
|---|---|---|---|---|---|---|---|
| **Ac. Achievement** | CWM of Kashmir | 200 | 67.56 | 12.934 | 398 | 0.882 | 0.378 |
| | CNWM of Kashmir | 200 | 68.73 | 13.579 | | | |

*(\*0.05 and \*\*0.01 levels of significance)*

It is evident from table No.3 that there exists no significant mean difference between children of working and non-working mothers of Kashmir on academic achievement the calculated t-value (0.88) which is less than the tabulated value at 0.05 level of significance. Therefore their hypothesis which reads "there is no significant mean difference in academic achievement between children of working and non-working mothers of Kashmir" stands accepted.

**Table No. 4: Showing the relationship of social intelligence and its dimensions with academic achievement of children of working and non-working mothers of Kashmir.**

| Variables | Y7 | Y8 | Y9 | Y10 | Y11 | Y12 | Y13 | Y14 | Y15 | X1 |
|---|---|---|---|---|---|---|---|---|---|---|
| Y7 | 1 | | | | | | | | | |
| Y8 | 0.433 | 1 | | | | | | | | |
| Y9 | 0.087 | 0.186 | 1 | | | | | | | |
| Y10 | 0.492 | 0.466 | 0.137 | 1 | | | | | | |
| Y11 | 0.109 | 0.066 | -0.08 | -0.018 | 1 | | | | | |
| Y12 | 0.14 | 0.146 | -0.045 | 0.126 | 0.148 | 1 | | | | |
| Y13 | 0.113 | 0.248 | 0.136 | 0.141 | 0.063 | 0.312 | 1 | | | |
| Y14 | 0.286 | 0.247 | 0.062 | 0.218 | 0.035 | 0.121 | 0.103 | 1 | | |
| Y15 | 0.47 | 0.556 | 0.844 | 0.502 | 0.032 | 0.17 | 0.322 | 0.338 | 1 | |
| X1 | 0.159 | 0.301 | 0.078 | 0.235 | -0.014 | 0.159 | 0.309 | 0.362 | 0.271 | 1 |

*\*\*Correlation is significant at the 0.01 level (2tailed).*
*\*Correlation is significant at the 0.05 level (2tailed).*

Y7=Patience, Y8=Co-cooperativeness, Y9=Confidence, Y10=Sensitivity, Y11= Recognition of social environment. Y12=Tactfulness, Y13=Sense of humor, Y14=Memory, Y15=Total, and X1=Academic achievement

It is evident from table No.4 that there exists a positive and significant correlation between academic achievement and the dimensions of social intelligence like patience (Y7), co-cooperativeness (Y8), sensitivity (Y10), tactfulness (Y12), sense of humor (Y13) and memory (Y14) as the calculated coefficients of correlation turned out 0.15, 0.30, 0.23, 0.15, 0.30 **and 0.36** respectively. The above table further reveals that there exist insignificant negative relationship between academic achievement and recognition of social environment (Y11) dimension of social intelligence as the calculated coefficient of correlation turned out -0.01

which is negative and insignificant at both levels of significance. The table No. 4 also shows that there is a positive insignificant correlation between academic achievement and the dimension of social intelligence confidence (Y9), as the coefficient correlation turned out 0.07 which is insignificant at both the levels of significance. The above table also reveals that there exist a significant positive relationship between academic achievement and social intelligence as the coefficient of correlation turned out 0.27 which is significant at both the levels of significance. Therefore the hypothesis which reads "There will be a positive relationship of social intelligence with academic achievement of children of working and non-working mothers of Kashmir" stands accepted.

Hence it can be interpreted that academic achievement has positive relation with the social intelligence. On the basis of above findings it can be said that children's having high social intelligence are found to possess high academic achievement.

**Table No. 5: Results pertaining to the relationship of scientific temper with academic achievement of children of working and non-working mothers of Kashmir**

| Variables | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | XI |
|-----------|------|------|------|------|------|------|----|
| Y1 | 1 | | | | | | |
| Y2 | 0.41* | 1 | | | | | |
| Y3 | 0.39* | 0.47* | 1 | | | | |
| Y4 | 0.27* | 0.41* | 0.49* | 1 | | | |
| Y5 | 0.20* | 0.20* | 0.31* | 0.28* | 1 | | |
| Y6 | 0.65* | 0.72* | 0.79* | 0.72* | 0.56* | 1 | |
| XI | .14* | .17* | .29* | .10* | .20* | .27* | 1 |

*\*\*Correlation is significant at the 0.01 level (2tailed).*
 *\*Correlation is significant at the 0.05 level (2tailed).*

Y1=Curiosity,Y2=Open-mindedness,Y3=Objectivity,Y4=Rationality,    Y5=Aversion    to superstitions and X1= Academic achievement

It is evident from table No.5 that there exists a significant positive correlation between academic achievement and all the dimensions of scientific temper like curiosity (Y1), open-mindedness (Y2), objectivity (Y3), rationality (Y4), and aversion of superstitions (Y5) as their calculated coefficients of correlation turned out 0.14, 0.17, 0.29, 0.10, and 0.20 respectively which are significant.The above table also reveals that there exist a significant positive relationship between academic achievement and scientific temper as the coefficient of correlation turned out 0.27 which is significant at both the levels of significance. Therefore the hypothesis which reads "There will be a positive relationship of scientific temper with academic achievement of children of working and non-working mothers of Kashmir" stands accepted. Hence it can be interpreted that academic achievement has positive relation with the scientific temper. On the basis of above findings it can be said that children's having high scientific temper are found to possess high academic achievement.

**Major Findings**

*A difference in social intelligence and its dimensions, scientific temper and its dimensions and academic achievement of children of working   and non-working mothers of Kashmir.*

1.  No significant mean difference between children of working and non-working mothers of Kashmir on dimensions of patience, cooperativeness, confidence, sensitivity, sense of humour and memory was found.
2.  A Significant mean difference was found between children of working and non-working mothers of Kashmir on the dimensions of recognition of social environment and tactfulness.
3.  Social intelligence of children of working and non-working mothers of Kashmir does not differ significantly with each other.
4.  No significant mean difference was found between children of working and non-working mothers of Kashmir on the dimensions of curiosity, open-mindedness, rationality and aversion to superstitious.
5.  A Significant mean difference between children of working and non-working mothers of Kashmir on the dimension of objectivity was found.
6.  Scientific temper of children of working and non-working mothers of Kashmir does not differ significantly with each other.
7.  No significant mean difference between children of working and non-working mothers of Kashmir on academic achievement was found.

*Relationship of social intelligence with academic achievement and scientific temper with academic achievement of children of working and non-working mothers of Kashmir.*

1.  A significant and positive correlation exists between the dimensions (patience, co-cooperativeness, confidence, sensitivity, tactfulness, sense of humour and memory) of social intelligence and academic achievement among the children of working and non-working mothers of Kashmir
2.  An Insignificant negative relationship exists between academic achievement and recognition of social environment dimension of social intelligence.
3.  There exists a significant positive relationship between academic achievement and social intelligence of children of working and non- working mothers of Kashmir.
4.  It was found that there exists a significant positive correlation between academic achievement and all the dimensions of scientific temper (curiosity, open-mindedness, objectivity, rationality, and aversion of superstitions among the children of working and non-working mothers of Kashmir.
5.  A significant positive relationship between academic achievement and scientific temper of children of working and non-working mothers of Kashmir was found.

**Discussion**

1.  A significant and positive correlation was found between the academic achievement and patience, co-cooperativeness, sensitivity, tactfulness, sense of humour and memory of children of working and non-working mothers of Kashmir as the obtained coefficient of correlation (r) 0.15, 0.30, 0.23, 0.15, 0.30, 0.36 and 0.27 respectively exceeds the critical

value at both levels of significance. However, an insignificant positive correlation was found between the academic achievement and confidence dimension of social intelligence and insignificant negative correlation was found between academic achievement and recognition of social environment -0.01 dimension of social intelligence among the children of working and non-working mothers of Kashmir.

2. A significant and positive correlation was found between the academic achievement and curiosity, open-mindedness, objectivity, rationality, and aversion of superstitions and overall scientific temper of children of working and non-working mothers of Kashmir. As the obtained coefficients of correlation (r) 0.14, 0.17, 0.29, 0.10, and 0.20. Thus it can be said that scientific tempers have a positive correlation with academic achievement. Greater the scientific temper; better will be the academic achievement.

### Suggestions

1. The further study may be replicated on large sample.
2. In educational institutions the individuality of the students should be respected and their opinions should be given due importance so that they can develop various qualities like confidence, cooperation, patience etc. among themselves and can stand on their own efforts.
3. Teachers working in institutions should be properly trained through various orientation and refresher courses to develop uniformity of thoughts and experience among themselves so that the dimensions like confidence, tactfulness, and recognition to social environment will be enhanced and used for social and academic betterment of the students.
4. Group project work should be introduced at Higher and Higher Secondary level to bridge the gap between the educational institutions and society.

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