# Study of personality and hemispheric preferences among science and arts stream students

Ms Kamalpreet kaur[1], Dr. Shikha Dhall[2*]

[1]*Assistant professor, G.M.T. College of Education, Ludhiana, Pin code*-141008 *India.*
[2*]*Principal, G.M.T. College of Education, Ludhiana, Pin code*-141008 *India.*
E mail: k.preet04@yahoo.com[1] dhallp09@gmail.com[2*]

## Abstract

In the present study an attempt has been made to find out the correlation between personality and hemispheric preferences among science and arts stream students of secondary school (separately for boys and girls). total sample of 200 students (100 arts and 100 science stream (both boys and girls) of IX class was drawn randomly from government as well as privately managed recognized secondary schools of Jalandhar City. Results of the study revealed that there exists a significant relationship between hemisphericity and some personality traits namely general ability, boldness, creativity, self-control and social warmth, individualism and sensitivity.

## 1. Introduction

Brain is an important part of our body; it controls the function of whole body. Our brain consists of two distinctive, but anatomically symmetrical units: the right and left hemispheres. Both the hemispheres are not control the opposite side of the body only, but also affect the personality of students. Personality is sum-total of all the biological innate disposition, impulses tendencies, appetites and instincts of individual and acquired disposition and tendencies. Heredity and environment both affect the personality or both contribute significantly towards the development of child's personality. Studies revealed that brain hemisphericity greatly influences the individual's learning style and all kind of intellectual and personality characteristics (Boyle & Dunn, 1998; Shiflett, 1989; Torrance, 1982). Kneip (1991) found that right hemispheric appeared to pictorial strategy, whereas left hemispheric subjects used a verbal strategy to process information.

### 1.1 Objectives of the Study

To study personality of science and arts stream students of secondary school.
To study relationship between personality and hemispheric preferences among science and arts stream students of secondary school.

### 1.2 Hypotheses of the Study

There does not exist significant difference in the personality of science and arts stream students of secondary school.
There does not exist significant relationship between personality and hemispheric preferences among science and arts stream students of secondary school.

## 2. Materials and Method

### 2.1 Sample of the Study

### 2.2 A sample of 200 students (100 arts and 100 science stream) was drawn randomly from government as well as privately managed recognized secondary schools of Jalandhar City.

### 2.3 Tools Used

Multi -Dimensional Assessment of Personality (Form-T) designed by Psy-Com. Services ( 1993)
Styles of learning and thinking (SOLAT) by Venkataraman, D. ( 1993)

## 3. Results and Discussion

*Table .1 Showing Significance of difference between arts and science stream students of secondary school on various personality traits*

| Personality traits | Groups | N | M | σ | t-ratio |
|---|---|---|---|---|---|
| Adaptability | Arts | 100 | 7.46 | 2.535 | 0.303 |
| | Science | 100 | 7.34 | 3.03 | |
| Academic achievment | Arts | 100 | 6.04 | 2.288 | 3.051** |
| | Science | 100 | 6.99 | 2.11 | |
| Boldness | Arts | 100 | 8.66 | 2.71 | 3.627** |
| | Science | 100 | 10.02 | 2.59 | |
| Competition | Arts | 100 | 5.84 | 1.993 | 2.171* |
| | Science | 100 | 6.48 | 2.17 | |
| Creativity | Arts | 100 | 7.39 | 1.886 | 3.120** |
| | Science | 100 | 8.34 | 2.39 | |
| Enthusiasm | Arts | 100 | 6.19 | 2.203 | 1.587 |
| | science | 100 | 5.69 | 2.25 | |
| Excitability | Arts | 100 | 7.01 | 2.670 | 0.568 |
| | Science | 100 | 7.22 | 2.55 | |
| General ability | Arts | 100 | 4.24 | 2.195 | 4.854** |
| | Science | 100 | 6.1 | 3.14 | |
| Guilt proneness | Arts | 100 | 6.43 | 2.065 | 0.641 |
| | Science | 100 | 6.24 | 2.12 | |
| Individualism | Arts | 100 | 7.05 | 2.165 | 2.375* |
| | Science | 100 | 6.32 | 2.18 | |
| Innovation | Arts | 100 | 7.09 | 2.366 | 1.983* |
| | Science | 100 | 6.43 | 2.34 | |
| Leadership | Arts | 100 | 7.69 | 2.693 | 1.338 |
| | Science | 100 | 8.19 | 2.59 | |
| Maturity | Arts | 100 | 8.07 | 2.585 | 0.135 |
| | Science | 100 | 8.12 | 2.64 | |
| Mental health | Arts | 100 | 8 | 2.557 | 0.210 |
| | Science | 100 | 7.92 | 2.82 | |
| Morality | Arts | 100 | 7.77 | 2.701 | 0.551 |
| | Science | 100 | 8 | 3.18 | |
| Self control | Arts | 100 | 7.98 | 2.56 | 0.473 |
| | Science | 100 | 7.81 | 2.52 | |
| Sensitivity | Arts | 100 | 7.55 | 2.422 | 0.397 |
| | Science | 100 | 7.41 | 2.56 | |
| Self sufficiency | Arts | 100 | 6.78 | 2.017 | 0.592 |
| | science | 100 | 6.59 | 2.49 | |
| Social warmth | Arts | 100 | 7.78 | 2.423 | 0.195 |
| | Science | 100 | 7.71 | 2.63 | |
| Tension | Arts | 100 | 6.3 | 2.495 | 0.549 |
| | Science | 100 | 6.49 | 2.39 | |

* significant at .05 level, ** significant at .01 level

Findings of table-1 show that the value of t-ratios for personality traits i.e, academic achievement (t-ratio=3.051), boldness (t-ratio=3.627) and creativity (t-ratio=3.12) are found significant at 0.01 level of significance and value of t-ratio for personality trait i.e. competition is found significant at 0.05 level of significance, for value of t-ratio being 2.171. It is also clear from the same table that science stream students are better than arts stream students on academic achievement, boldness, competition and creativity for mean value being 6.99, 10.02, 6.48 and 8.34 respectively, which are higher in case of science stream students as compare to arts stream students. The results of the same table shows that value of t-ratio for personality traits general ability and individualism is found significant at 0.01 and 0.05 level of significance respectively. Further it is stated that science stream students score better than arts stream students on general ability, while arts students score better than science students on individualism. Calculated t-ratio for personality trait innovation is 1.983, which is significant at 0.05 level of significance. It shows that arts and science stream students differ significant on innovations.

**Table. 2** *Showing values of co-efficient of correlation between hemispheric preferences and personality traits (N=200)*

| Personality traits | Co-efficient of correlation |
|---|---|
| Adaptability | -0.031 |
| Academic achievement | 0.099 |
| Boldness | -0.139* |
| Competition | -0.02 |
| Creativity | -0.20** |
| Enthusiasm | 0.1123 |
| Excitability | 0.005 |
| General ability | -0.196* |
| Guilt proneness | 0.061 |
| Individualism | -0.048 |
| Innovation | 0.141* |
| Leadership | -0.066 |
| Maturity | -0.07 |
| Mental health | -0.02 |
| Morality | -0.11 |
| Self control | -0.17* |
| Sensitivity | 0.152* |
| Self- sufficiency | 0.119 |
| Social warmth | -0.141* |
| Tension | -0.036 |

* significant at .05 level,** significant at .01 level

Results of table 2, shows that hemispheric preferences has significant co-relation with creativity for values of 'r' being 0.20, which is significant at 0.01 level of significance. It has been further revealed that hemispheric preferences have statistically significant relationship with boldness and innovation for values of 'r' being -0.139 and 0.141 respectively, which are significant at 0.05 level of significance. The finding of the same table reveals that hemispheric preferences has statistically significant relationship with self-control (r=0.17), sensitivity (0.152) and social warmth (-0.141). Thus the hypothesis 2, "There exist no significant relationship between personality and hemispheric preferences among science and arts stream students of secondary school" is partially accepted.

## 4. Conclusions

Arts students are better than science students on the following personality traits i.e. individualism and innovation. They prefers to do things on his own, thinks over his mistakes repeatedly and how to avoid them. On the other hand science students are better than arts students on academic achievement, boldness, competition, creativity and general ability. This show that science stream students are more ambitious overtly interested in their position, bold, energetic with good insight, aggressive and reserved. They have greater mental capacity to learn.

There exists a significant relationship between hemisphericity and some personality traits namely general ability, boldness, creativity, self-control and social warmth, individualism and sensitivity. This suggest that these students are experimental in thinking , liberal , inclined to experiment with problem solution and prefer to use reason rather than force in getting things done.

### 4.1 Educational Implications:

The present study is of great value for educational programmes in much way. The findings show that science stream students are better than arts students on academic achievement, competition, boldness, creativity and general ability, while arts students are better on Individualism and Innovation. These findings are important for educational planners for framing curriculum. The teacher have to understand their own personality traits , hemispheric, and other attributes as well as those of pupils in teaching-learning process. Various learning and thinking styles can be improved and learn throughout the life.

## 5. References:


1• Boyle RA, and Dunn R (1998) Teaching law students through individual learning styles. Albany Law Review, 62, 213-255.

2• Kneip LB (1991) Effects of cerebral hemisphericity on sentence/ picture verification reaction times and preference for picture or verbal imaging strategy. Dissertation Abstracts International. 52(4). 2330-B.

3• Shiflett SC (1998) Validity evidence for the Myers briggs type indicator as a measure of hemisphere dominance. Educational and psychological measurements. 49(3), 741-745.

4• Torrance EP (1982) Hemisphericity and creativity. Journal of research and development in education. 15(3), 29-37.

5• Venkataraman D (1993) SOLAT by Psy-Com Services, New Delhi in 1993.