



Research Article

CORRELATING HANDEDNESS AND INTELEAGENT QUOTIENT – A PILOT STUDY

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ABSTRACT

Handedness is natural or biological preference of using one hand more than the other in performing special task depending on which cerebral hemisphere is dominant for the task. We have attempted to correlate handedness and intelligence through a pilot study. **Aim:** To correlate the handedness and intelligent quotient (IQ). **Method:** Raven’s standard progression matrices scale were used to find the intelligent quotient. **Result:** The maximum IQ was average which was around 52% of the subjects, although there were also below average and intellectually impaired of about 23% in each. The IQ levels of right handed ranged were from below average to intellectually superior. None were there in intellectually impaired in right handed subjects. The below average % was also meagre in right handed but about 50% belonged intellectually superior group. **Conclusion:** This pilot study showed that the right handed had more of superior intelligent subjects than that of left handed, which yet needs to be proved with the help of more subjects .

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INTRODUCTION

Handedness is natural or biological preference of using one hand more than the other in performing special task depending on which cerebral hemisphere is dominant for the task [1]. We would have seen parents changing the handedness of left hand children believing that only right hand children will have high IQ. This arose interest in finding whether belief is true. There are many studies which proves that left handed subjects are more intelligent whereas studies also tell that right handed person are more intelligent. On the other hand some studies also proofs that there is no difference in intelligence in them. We have attempted to correlate handedness and intelligence through a pilot study.

Aim

To correlate the handedness and intelligent quotient (IQ)

Objectives

1. To evaluate IQ in right handed subjects
2. To evaluate IQ in left handed subjects.
3. To compare the IQ between right handed and left handed subjects.

METHODOLOGY

After obtaining written informed consent and institutional ethical clearance around 25 left handed students and 30 right handed students between the age group of 17 to 20 years from a college were included in the study.

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A structured questionnaire was given to remove the confounding factors like socio economic status, age, intake of drugs, any chronic illness. Raven’s standard progression matrices scale [2,3] were used to find the intelligent quotient. The score obtained were classified into grades depending on the percentile obtained.

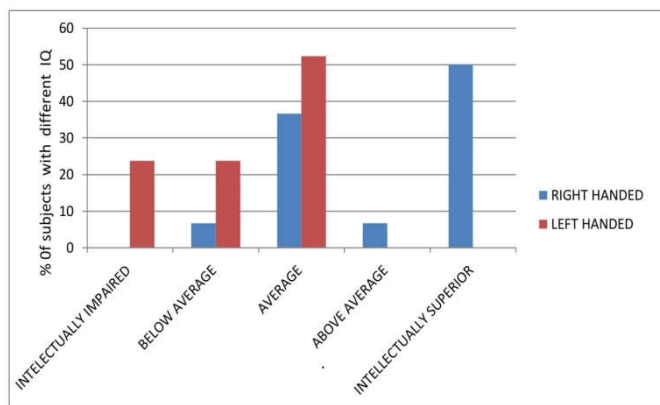
Intelligent Quotient Classification	Grade	Percentile
Intellectually Impaired	V	IF A Score Lies At or Below THE 5 th Percentile For That Age Group.
Below Average	IV	IF Score Lies At or Below THE 25 th Percentile. It may be designated IV-IF IT Lies At or Below the 10 th Percentile
Average	III	If Scored Is Between The 25 th D 75 th Percentile. IT May Be Designated III+ If Above The 50 th Percentile
Above average	II	If Score Lies At The 75 th Percentile or above. If it is Between THE 90 th & 94 th Percentile IT CAN NE II+
Intellectually superior	I	At Above 95 th Percentile

RESULT

Graph Showing the Relationship between Handedness and Intellegent Quotient

Table Showing the Percentage of Subjects with Various Iq In The Both The Handedness

Intelligent quotient	% of subjects in Right Handed	% of subjects in Left Handed
Intelectually impaired	0	23.8
Below average	6.66	23.8
Average	36.66	52.38
Above average	6.66	0
Intellectually superior	50	0



The above graph shows the relationship between handedness and intelligent quotient. The red bars shows the percentage of subjects with different IQ of left handed subjects and blue bars shows that of right handedness.

DISCUSSION

We can see from the graph from our study that the intelligent quotient of left handed subjects ranges from intellectually impaired to average IQ. The maximum IQ was average which was around 52% of the subjects, although there were also below average and intellectually impaired of about 23% in each. The IQ levels of right handed ranged were from below average to intellectually superior. None were there in intellectually impaired in right handed subjects. The below average % was also meagre in right handed but about 50% belonged intellectually superior group.

Studies done by Curtis Hardyck *et al* [4] have shown that there is no difference in IQ between right and left handedness.

There are also studies by saba Ghyas *et al* [5] that indicated that left handed participants were significantly more intelligent than the right handed participants ($p < .05$) and time taken by the right handers was significantly greater than that of the left handers ($p < .05$).

Since ours is a pilot study and the sample size is less, as the prevalence of left handed subjects were less, it was difficult to do statistical analysis. But we can analyse from the graph and the table that the right handed subjects showed more percentage of intellectually superior subjects and the left handed had more of average IQ.

CONCLUSION

This pilot study showed that the right handed had more of superior intelligent subjects than that of left handed, which yet needs to be proved with the help of more subjects .

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