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A Study of General Intelligence among Degree College Students

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ABSTRACT

The present study explores the general intelligence level of degree college students. It also compares the general intelligence of students in terms of the type of management of the college (govt./private), locality of the college (urban/rural), the stream in which students study (science/arts) and the gender (male/female). Data was collected from a representative sample of 625 students from different degree colleges of Punjab. Test of General Intelligence for College Students by Misra and Pal was employed to conduct the study. T-test was used to analyse the data. The results of the study are: (a) Significant difference exists in the general intelligence of govt. and private college students, govt. college students scoring higher than the private college students. (b) There is significant difference in the general intelligence of urban and rural college students, urban college students showing higher score than their rural counterparts. (c) Science students show higher general intelligence than the arts students. (d) Male and female students do not differ significantly on general intelligence scores.

Keywords: General intelligence, urban and rural college, data

Intelligence is the mental abilities of a person to learn from experience, adapt to new situations, understand and handle abstract concepts and use knowledge to manipulate one's environment. Man is bestowed with certain mental abilities which make him a rational being. He can reason, understand and adapt himself to new situations. Man, by using his mental power is superior to all other living beings but differences of mental powers do persists within human family. Some can grasp and learn quickly whereas others are slow in learning.

Human intelligence has been defined in various ways as a capacity for compression and reasoning. Stern (1914) defined intelligence as a general capacity of an individual consciously to adjust his thinking to new requirements. It is general mental adaptability to new problems and conditions of life. Wechsler (1944) defined intelligence as the aggregate or global capacity of an individual to act purposefully, to think rationally and to deal effectively with his environment.

In general terms, intelligence is the ability to learn about, learn from, understand, and interact with one's environment. Mangal (2007) has defined intelligence as a sort of mental energy, in the form of mental or cognitive abilities, available with an individual which enable him to handle his environment in terms of adaptation to face novel situations as effectively as possible.

Intelligence is a very general mental capability that, among other things, involves the ability of a person to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. General intelligence is a construct that includes problem solving abilities, spatial manipulation and language acquisition.

Intelligence is normally distributed in nature. It is a product of both heredity and environment. It grows with age and its vertical growth ceases at the age of 16 to 20. It shows a wide variety of individual differences but factors like sex, race, culture, caste

and colour, etc. are not found to influence the degree of intelligence.

Review of Related Literature

Decades of research on human mental abilities have demonstrated that the scores of intelligence tests are positively correlated with several desirable outcomes and negatively correlated with several undesirable outcomes.

Sinha's (1967) study showed arts and science groups significantly discriminated (beyond 0.01 level) on the variable of intelligence, science students scored significantly higher on the intelligence test than the students of arts. Prakash (1972) found urban students have higher intelligence than the rural tribal students. The southern and central zone urban boys are better than girls, while the girls from rural areas of northern zone were better than boys in intelligence. Tiwari (1977) concluded that boys excel girls and urban students are superior to their rural counterparts in intelligence.

Sharma (1978) in his study found that govt. school teachers were inferior to private school teachers and female teachers were found to be inferior to male teachers in intelligence. Singh (1982) in his study found higher mean intelligence score of urban students as compared to those of rural students. The mean intelligence score of science students was significantly higher than that of arts students. Chatterji (1983) in his study found science students the most intelligent and the arts students the least. Devi (2003) has reported no significant difference in intelligence of boys and girls. Arune (2006) in his study found that boys and girls differ significantly (at 0.05 level) in the mean score of intelligence. Management has no significant effect in the mean score of intelligence i.e. private and govt school students are identical in their intelligence. Dhammi and Choubey (2014) found that science and humanities group students, graduate and post graduate students showed no significant difference in their general intelligence but difference was found in case of boys and girls, boys being more intelligent than girls.

Statement of the Problem

A Study of General Intelligence among students of Degree Colleges of Punjab.

Objectives of Study

1. To study the general intelligence of degree college students.
2. To compare the general intelligence of students studying in govt. and private colleges of Punjab.
3. To compare the general intelligence of students studying in colleges of urban and rural areas.
4. To compare the general intelligence of students studying in science and arts streams.
5. To compare the general intelligence of male and female students studying in degree colleges of Punjab.

Hypotheses of the Study

1. There will be no significant mean difference in the general intelligence of govt and private college students.
2. There will be no significant mean difference in the general intelligence of urban and rural college students.
3. There will be no significant mean difference in the general intelligence of students studying in science and arts streams.
4. There will be no significant mean difference in the general intelligence of male and female students.

Delimitations of the Study

1. The study was restricted to Punjab state only.
2. Only the students pursuing final year of their graduation course (B.A., B.Sc.,B.Com) from various degree colleges were taken for the study.
3. Data was collected from 625 students only.
4. Among private colleges, only private aided colleges were included in the sample.

Research Methodology

Descriptive survey method of research was employed for the conduct of the study.

Sample of the Study

Students pursuing science and arts subjects in final year of their graduation course studying in

Table 1: Frequency distribution of General Intelligence of college students (N=625)

Class Interval	Frequency	Percentage	CPF
45-49	1	0.16	100.00
40-44	10	1.60	99.84
35-39	65	10.40	98.24
30-34	144	23.04	87.84
25-29	126	20.16	64.80
20-24	128	20.48	44.64
15-19	99	15.84	24.16
10-14	52	8.32	8.32

Mean	Median	Mode	SD	Skewness	Kurtosis
25.55	25.83	26.39	7.75	-0.11	0.269

various govt. and private degree colleges of Punjab constituted the universe of the study. In order to draw a representative sample, eighteen degree colleges affiliated to three universities of Punjab i.e. Panjab University, Chandigarh; Punjabi University, Patiala and Guru Nanak Dev University, Amritsar were selected. The selection of the colleges was done according to the convenience of the investigator and subjects within the colleges were selected on the basis of randomization technique of sampling. Due weightage was given to male and female students, students studying in science and arts stream, urban and rural colleges, and govt. and private colleges while selecting the sample.

Tools Employed

The tool used to collect the data was:

- ❒ 'Test of General Intelligence for college students' by Misra and Pal (2007).

Statistical Techniques Used

The following statistical techniques were used for analyzing the data:

- ❒ Descriptive statistics i.e. mean and standard deviation were used to describe the data.
- ❒ t-test was employed to compare the intelligence of students in terms of the management of the college in which they study (i.e. govt./private), locality of college (i.e. urban/rural), stream of study of students (i.e. science/arts) and gender (i.e. male/female).

Analysis and Interpretation of Data

(a) General Intelligence

The frequency distribution and cumulative percentage frequency of college students on general intelligence are given in Table 1.

The scores of students on the variable of general intelligence range from 10 - 45 on a scale ranging from 0-60. It may be observed from the table that the mean score of intelligence of college students came out to be 25.55. The distribution of intelligence scores show that 20.16% of students lie in mean interval. There are 44.64% of students who have intelligence score less than the mean interval and 35.20% of the students have score higher than mean interval.

This means that 20% of the students have average general intelligence, 45% of the students have below average and 35% of the students have above average general intelligence.

The distribution of intelligence scores were found to be closely resembling the normal distribution as is clear from the value of skewness (-0.11) and kurtosis (Ku.=0.269).

(b) Significance of mean difference between Intelligence of Govt. and Private College Students

Table 2 shows the mean score of students studying in govt. and private colleges on General Intelligence Test along with their S.D. as well as t-value indicating the significance of difference between their means.

Table 2: General Intelligence Scores of Govt. and Private College Students (N=625)

Group	N	Mean	S.D.	S.E.	t-value
Govt.	188	27.8	7.0	0.63	5.08
Private	437	24.6	7.9		Significant

As shown in Table 2, the mean score of general intelligence of govt. college students came out to be 27.8 and that of private college students, its value is 24.6. The value of S.D. for the govt. and private college students are 7.0 and 7.9 respectively. The t-value testing the significance of difference between the means is 5.08 which is significant at 0.01 level of significance indicating that there is significant difference in the general intelligence of govt. and private college students. Thus the hypothesis 1 stating 'There is no significant difference in the general intelligence of govt. and private college students' is not accepted. It may be said that the type of college in which students study has significant impact on their intelligence, govt. college students show higher intelligence than that of private college students.

The result of present study is in contrast to the study of Sharma (1978) who found that govt. school teachers are inferior to private school teachers in intelligence and the study of Arune (2006) which shows that govt. and private school students are identical in their intelligence.

(c) Significance of mean difference between intelligence of urban and rural college students

Table 3 shows the mean score of students on general intelligence test studying in colleges located in urban and rural areas along with their S.D. as well as t-value.

Table 3: General Intelligence Scores of Urban and Rural College Students (N=625)

Group	N	Mean	S.D.	S.E.	t-value
Urban	432	27.55	7.30	0.6	10.75
Private	193	21.10	6.85		significant

It is shown in table 3 that t-value obtained for students studying in urban and rural colleges (t = 10.75) was more than the table value for CR at 0.01 level of significance (2.58).This means that there is significant difference in the general intelligence of urban and rural college students. Thus the hypothesis 2 stating 'There is no significant difference in the general intelligence of urban and rural college students' is not accepted. It may be said that the locality of college has significant impact on the general intelligence of students, students studying in urban colleges show higher general intelligence than that of those studying in rural colleges.

The result of present study is in agreement with the findings of Prakash (1972), Tiwari (1977) and Singh (1982) showing higher mean intelligence score of urban students as compared to their rural counterparts.

(d) Significance of mean difference between general intelligence of science and arts students

Table 4 shows the mean score of students studying in science stream and those studying in arts stream along with their S.D. as well as t-value.

Table 4: General Intelligence Scores of Urban and Rural College Students (N=625)

Group	N	Mean	S.D.	S.E.	t-value
Science	289	29.45	6.35	0.54	13.52
Arts	336	22.15	7.20		significant

As shown in table 4, the mean score of general intelligence of science students is 29.45 and that of arts students, its value is 22.15. The value of S.D. for the science and arts students are 6.35 and 7.20 respectively. The t-value indicating the significance of difference between the means is 13.52 which is significant at 0.01 level of significance meaning thereby that there is significant difference in the general intelligence of science and arts students. Thus the hypothesis 3 stating 'There is no significant difference in the general intelligence of science and arts students' is not accepted. It may be said that the stream in which the students study has significant impact on the general intelligence of students, students studying in science stream show higher general intelligence than that of those studying in arts stream.

The result of present study is in agreement with the findings of Sinha (1967), Singh (1982) and Chatterji (1983) who found that science students show higher mean score on intelligence test than the arts students but the finding is in contrast to the study of Dhammi and Choubey (2014) who found no significant difference in general intelligence of science and humanities group students.

(e) Significance of mean difference between general intelligence of male and female students

Table 5 shows the mean score of male and female

students on general intelligence test along with their S.D. as well as t-value.

Table 5: General Intelligence Scores of Male and Female Students (N=625)

Group	N	Mean	S.D.	S.E.	t-value
Male	264	25.85	7.20	0.62	0.81
Female	361	25.35	8.10		Non-significant

As shown in table 5 the t-value for general intelligence of male and female students (t = 0.81) is less than the table value (=1.96) even at 0.05 level of significance. It means that there is no significant difference in the general intelligence of male and female students. Thus, the hypothesis 4 stating 'There is no significant difference in the general intelligence of male and female students' is accepted. It may be said that male and female students do not differ in their general intelligence.

The result of the present study is in agreement with the findings of Devi (2003) who reported no significant difference in intelligence of boys and girls. But findings are in contrast to the findings of Tiwari (1977), Sharma (1978), Arune (2006) and Dhammi and Choubey (2014) which show significant difference in the intelligence of boys and girls.

CONCLUSION

1. 20% students have average intelligence, 45% students have below average and 35% students have above average general intelligence.
2. Significant mean difference exists in the general intelligence of govt. and private college students, govt. college students showing higher intelligence than the private college students.
3. There is significant mean difference in the intelligence of urban and rural college students, urban college students show higher intelligence scores as compared to their rural counterparts.
4. Significant mean difference exists in the general intelligence of students studying in science and arts streams, science students showing higher intelligence level than that of arts students.
5. Male and female students do not differ significantly in their general intelligence.

REFERENCES

Arune, P.K. 2006. "Process outcomes in science and extension" *Journal of Educational Research and Extension*, **43**(1): 34-42.

Chatterji, P.S. 1983. "A comparative study of personality, intelligence and achievement motivation of students in different academic groups" *Ph.D. Thesis (Education)*, Patna University. In M.B. Buch (Ed.), Fourth survey of research in education, Vol. I (1983-88), NCERT, New Delhi, pp. 351-352.

Devi, G. 2003. "A study of verbal intelligence in relation to achievement in mathematics and Hindi language of secondary stage" *M.Ed. Dissertation*, P.U., Chandigarh.

Dhammi, S.K. and Choubey, A.K. 2014. "A study of emotional intelligence as a correlate of General Intelligence and style of learning and thinking" *Journal of Education and Practice*, **5**(10).

Mangal, S.K. 2007. *Advanced Educational Psychology*, Prentice-Hall, New Delhi, p. 280.

Misra, K.S. and Pal, S.K. 2007. *Test of General Intelligence for college students*, National Psychological Corporation, Agra.

Prakash, J. 1972. "A comparative study of urban, rural and tribal higher secondary students of Madhya Pradesh with reference to their General Mental Ability and Interest Patterns" *Ph.D. (Psychology)*, Sagar University. In M.B. Buch (Ed.), Second survey of research in education (1972-78), NCERT, New Delhi, pp. 103.

Sharma, M.L. 1978. "Success in teaching in relation to self-concept, intelligence, experience and academic achievement of teachers" *Ph.D. Thesis (Education)*, Panjab University. In M.B. Buch (Ed.), Second survey of research in education (1972-78), NCERT, New Delhi, pp. 589.

Sinha, N.C.P. 1967. "A study of intelligence and some personality factors in relation to academic achievement of school students" *Ph.D. (psychology)*, Magadh University. In M.B. Buch (Ed.), Second survey of research in education (1972-78), NCERT, New Delhi, pp. 359.

Singh, O.P. 1982. "A study of creativity in high school students in relation to intelligence and socioeconomic status" *Ph.D. Thesis (Education)*, Avadh University. In M.B. Buch (Ed.), Third survey of research in education (1978-83), NCERT, New Delhi, pp. 589.

Stern, W. 1914. *Psychological methods of testing intelligence*, Warwick and York Inc, 1964 Baltimore.

Tiwari, S.N. 1977. A comparative study of personality of high school boys and girls" *Ph.D. Thesis (Education)*, Gorakhpur University. In M.B. Buch (Ed.), Second survey of research in education (1972-78), NCERT, New Delhi, p.203.

Wechsler, D. 1944. *The Measurement of Adult Intelligence*, Williams and Wilkins, New York.