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COMPARISION OF INTELLIGENCE OF MALE AND FEMALE SPORTSPERSONS OF DIFFERENT BLOOD GROUPS

Pushpraj Singh[1], Dr. Rajkumar Sharma[2] and Dr. B. John[3]

AFFILIATIONS:

1. Ph.D Scholar, Physical Education, Dr. C. V. Raman University, Kota Road , Bilaspur (Chhattisgarh)
2. Chief Gymnastic Coach, Sports Authority of India, NSTC, Malhar Asharam, Indore (M.P.)
3. Assistant Professor, Physical Education, Dr. C. V. Raman University, Kota Road , Bilaspur (Chhattisgarh)

ABSTRACT

The purpose of the study was to compare and investigate the intelligence of male and female sportspersons of A, B, AB and O blood groups. Two hundred and eighty six sportspersons were selected from Eleventh grade students of English Medium Schools recognized by C.B.S.E., New Delhi situated in Bilaspur (Chhattisgarh) ranging between 16 to 18 years of age. In the present study, Group Test of General Mental ability (Rev.) by Dr. S. Jalota (1972) was used to measure the intelligence of the subjects. This test was selected for use because of its reported characteristic, popularity and suitability. To investigate the intelligence of male and female sportsperson of different blood groups, means, standard deviations and t-ratio were computed. The results of the study revealed that Female sportspersons of A+ blood group were found to have greater amount of intelligence than their counter parts Male sportspersons of B+, AB+ and O+ blood group were found to have greater amount of intelligence than females. Male and female sportspersons of A+, B+ and AB+ blood groups did not differ significantly in their intelligence. Male and female sportspersons of O+ blood group had significant difference in their intelligence.

Keywords: Male, Female, Sportspersons, Blood groups, Intelligence, C.B.S.E School.

1. INTRODUCTION

In the present days, every individual feels the importance of educational values in their life. In the process of education, many people follow the concept of education. They think that literacy and theoretical knowledge is the only channel of education, where as, education includes the mental, physical, social, spiritual, intellectual and economical etc., dimension to the process of learning the education

In 1900, Landsteiner, K showed that people could be divided into three groups(now called A, B, and O) on the basis of whether their red cells clumped when mixed with separated sera from people. A fourth group (AB) was soon found. This is the origin of the term 'blood group'. A blood group could be defined as, 'An inherited character of the red cell surface, detected by a specific alloantibody **(Daniels & Bromilow, 2013).**

Karl Landsteiner discovered human blood groups in 1900 and laid the foundation for the modern medical practice of blood transfusion. The ABO blood groups have a role in physiology beyond their importance for blood transfusion. In the past few years, red cell antigens (A and B carbohydrate structures) have been found on a variety of cells, tissues and proteins, indicating that these antigens might be involved in different physiological processes **(Landsteiner, 1900).**

Landsteiner discovered the ABO blood group system by mixing the red cells and serum of each of his staff. He demonstrated that the serum of some people agglutinated the red cells of other. From these early experiments, he identified three types, called A, B and C (C was later to be re-named O for the German "Ohne", meaning "without", or "Zero", "null" in English). The fourth less frequent blood group AB, was discovered a year later. In 1930, Landsteiner received the Nobel Prize in physiology and medicine for his work **(Dariush & Yeganeh 2013).**

The primary function of blood is to supply oxygen and nutrients as well as constitutional elements to tissues and to remove waste products. The hormones and other substances to be transported between tissues and organs are enabled by the blood. The main function of blood is maintaining homeostasis by acting as a medium for transferring heat to the skin and by acting as a buffer system for bodily pH. The blood is circulated through the lungs and body by the pumping action of the heart. The blood is pressurized by the right ventricle to send it through the capillaries of the lungs, while the left ventricle repressurizes the blood to send it throughout the body. Pressure is essentially lost in the capillaries, hence gravity and especially the actions of skeletal muscles are needed to return the blood to the heart **(Borah, et.al., 2013)**

The frequency of ABO blood groups in different Iranian ethnic groups was released (Walter, et.al., 1991). The frequency of blood groups, serum proteins and red cells enzymes in various Iranian populations were reported **(Amirshahi, et. al., 1992).**

Intelligence is a very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather it reflects a broader and deeper capability for comprehending our surroundings—"catching on," "making sense" of things, or "figuring out" what to do. **(Gottfredson, 2004).**

This definition emphasizes that intelligence represents the ability to solve problems (including problems of comprehension) by thinking. Intelligence is widely considered to occupy the apex of a hierarchy of more specific abilities that are all related to each other **(Carroll, 1993).**

Males with blood group O show high IQ level. These are intellectually superior. The average and below average individuals are found to be having predominantly with blood group B

and females of rural areas with high IQ are found to be having blood group O. The females with average IQ are found to be having blood group B. In urban areas , males with high IQ are found to be having blood group O. Average and below average males are found to be having blood group O followed by blood group B. Females of urban area, the individuals with high and low IQ level are found to be having blood group B. **(Kohli1 & Sharma, 2016)**

A question of some interest to Indian sport psychologists has been the relationship of intelligence to athletic performance **(Kamlesh, 1986; Punia & Mann, 1986; Sandhu, 1984; Sharma & Kamlesh, 1983).**

Sport affect intelligence in some general way, either favorably or unfavorably, and second, is there a factor of "sport intelligence"? Sport psychologists have debated this issue, some arguing against the intelligence scales used and questioning the objectives of some of the studies as well as whether the factor of sport intelligence is a valid one. However, as is the case elsewhere, general intelligence does correlate with athletic success. But more research is needed to discriminate between general intelligence and sport intelligence. Yet to be addressed is the technology to measure intelligence, especially sport intelligence-if this concept is a valid one-and the relationship of intelligence to skill acquisition **(Kamlesh and Mohan, 1987).** Anwana and Cobbach in 1989 viewed that students do badly academically on account of things other than low intellectual ability **(Butcher, 1968).**

Intelligence could be a term that is thus normally used and however rather difficult to to define in an exceedingly precise and usually accepted form . This problem of definition maybe as a result of in recent years psychologists have gathered most material concerning it by use of intelligence tests that we discover it difficult to adopt an easy and comprehensive which means of the term. Intelligence primarily should not be confused with intellect though, it is concerning intellect or knowledge. It is quite possible that it should not happen usually that a person with a high degree of intelligence could also be poor in intellect merely for the rationale he never tried to use his intelligence and build up his intellect. He involves three main characteristic qualities of one's behavior: (a) the tendency to require and maintain a certain direction, (b) the capability to create variations for the aim of getting a delineated goal, (c) the facility of' power of self criticism **(Boaz, 1957).**

Gupta (1973) found that intelligence seemed to be the predictor of academic success. Socio-economic status was independent of academic achievement.

Atoom (2014). found that the blood group (AB) received the highest average in the Intelligence Quotient(IQ) test which is also the highest in the GPA. And that the blood type (B) was the lowest in the GPA and in test results. The researcher recommended to expand the circle of the research to include all Jordanian universities , other universities and schools in a longer periods of time. Intelligence is a measure of general cognitive functioning capturing a wide variety of different cognitive functions **(Marsman, et.al., 2017).** It is a theoretical ability that affects all sorts of mental activities, no matter what are the subject of the activity and its shape **(Atoom, 2016).**

Intelligence is a construct generally associated with the capacity to learn. Intelligence is the best individual predictor of academic achievement **(Erath, et. al., 2016).** O blood group is more prevalent in both the sexes (25% in males and 14.5% in females) than A, B and AB.Clotting time is found to be more in O and AB blood groups in females, whereas bleeding time in different blood groups did not show any change in both the sexes **(Yasmeen, Ali and Shaikh, 2014)**.

2.METHODOLOGY

2.1 Selection of Subjects

Two hundred and eighty six (Males=142, Females=144) sportspersons were selected for the purpose of present investigation. All the male and female sportspersons belonging to Eleventh grade students of English Medium Schools recognized by C.B.S.E., New Delhi and situated in Bilaspur District **(**Chhattisgarh) ranging between 16 to 18 years of age .

2.2 Selection of Variables

The intelligence and A, B, AB and O blood groups were taken into consideration for the present investigation.

2.3 Instrument

In the present study, Group Test of General Mental ability (Rev.) by Dr. S. Jalota (1972) was used to measure the intelligence of the subjects. This test was selected for use because of its reported characteristic, popularity and suitability. It is a verbal group of general mental ability prepared in different language including Hindi. Hindi version was considered appropriate for the schools of chhattisgarh, where the present study was conducted. There are one hundred items in this test. They are of seven types: similar, opposites, analogies, numerical series, best answers, classificatory and reasoning.

The scoring of Group Test of General Mental Ability is done with the help of stencil keys following the procedure laid down in respective manual. The Maximum score for the test is 100. Blood groups were taken from school record.

2.4 Statistical Analysis

To investigate the intelligence of male and female sportsperson, means and standard deviations were computed. To find out the significance of difference between male and female sportsperson in the intelligence of different blood groups Eleventh grade students of English Medium Schools recognized by C.B.S.E., New Delhi and situated in Bilaspur District **(**Chhattisgarh), t-ratios were computed.

3. RESULTS

To assess the intelligence of male and female sportspersons belong to different blood groups mean, standard deviation, and t-ratio) were computed. and data pertaining to this, has been presented in table 1 to 5

TABLE 1
DESCRIPTIVE STATISTICS OF INTELLIGENCE OF MALE AND FEMALE SPORTSPERSONS OF DIFFERENT BLOOD GROUPS

S.NO.	Blood Groups	Sex	N	Mean	SD
1	A+	Male	24	49.46	12.65
		Female	25	53.00	10.21
2	B+	Male	34	66.71	14.44
		Female	38	63.39	12.08
3	AB+	Male	19	55.11	15.26
		Female	21	52.38	14.46
4	O+	Male	65	62.82	12.08
		Female	60	58.53	11.85

The mean scores of intelligence of male and female sportspersons belong to different blood groups studying in higher secondary schools of Bilaspur districts have been depicted in figures 1 and 4.

FIGURE 1

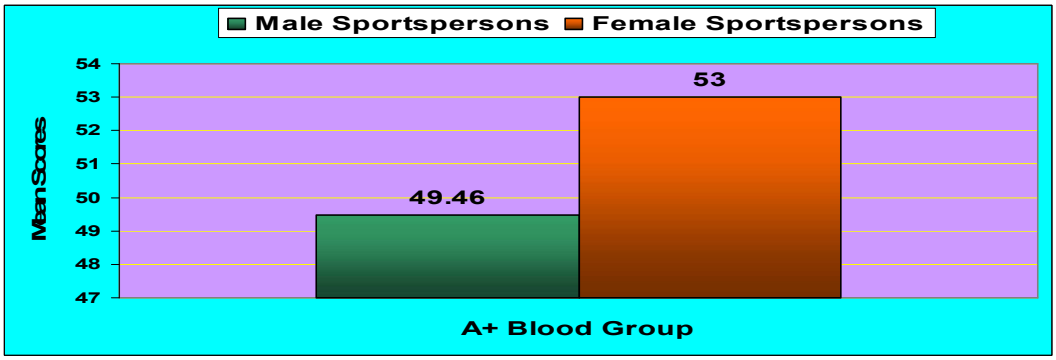

FIGURE 2

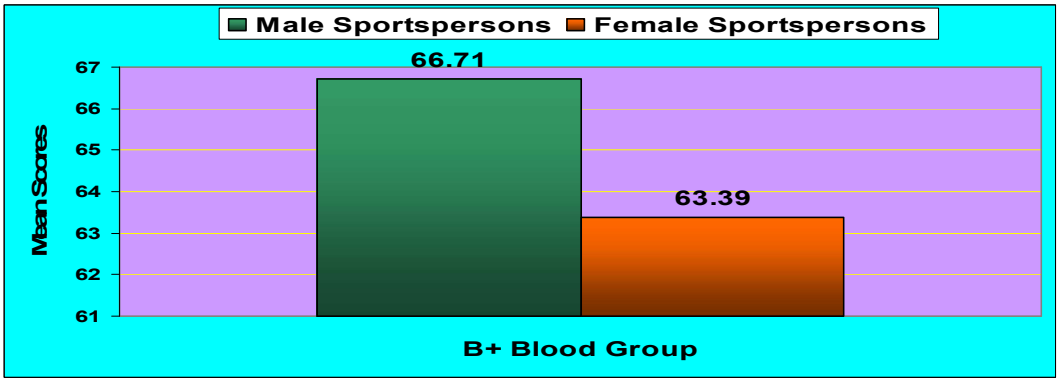

FIGURE 3

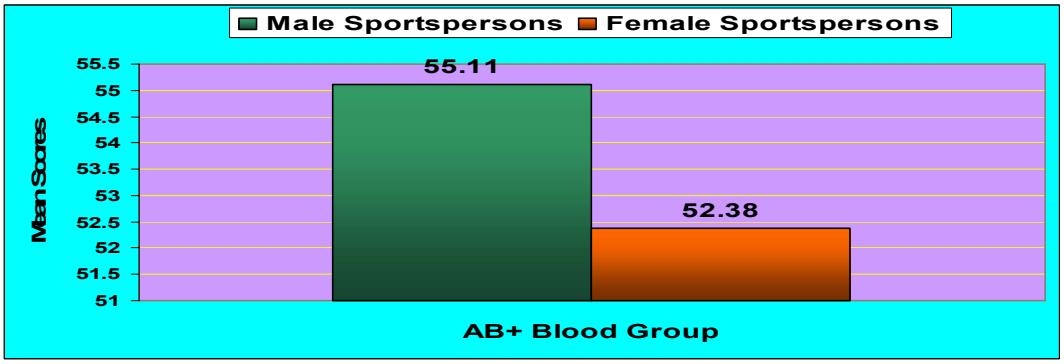

FIGURE 4

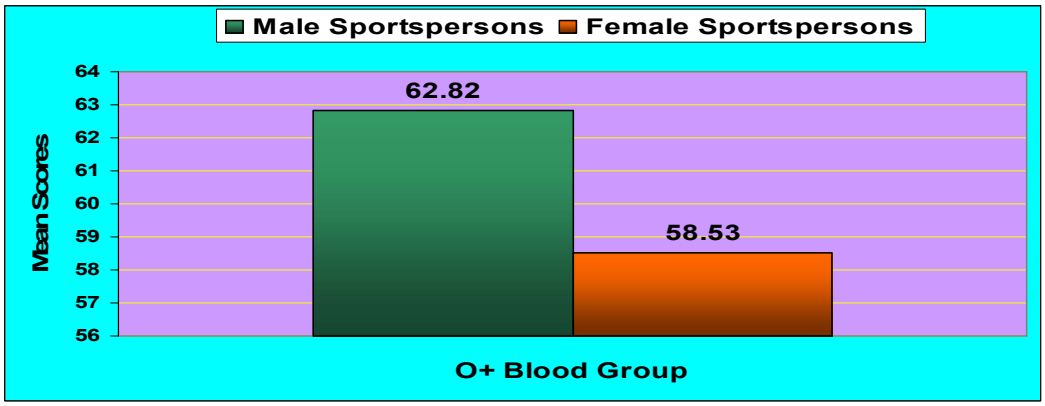

TABLE 2
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES ON INTELLIGENCE OF A+ BLOOD GROUPS OF MALE AND FEMALE SPORTSPERSONS

Blood Group	Sex	N	Mean	Mean	MD	σ DM	t-ratio
A+	Male Female	24 25	49.46 53.00	49.46 53.00	3.54	3.27	1.08

Significant at .05 level. t.05 (47) = 2.01

It is evident from Table 2 that the statistically significant difference was not found between male and female sportspersons of A+ blood group in their intelligence, as the obtained t-value of 1.08 was less than the required t.05 (47)= 2.01.

TABLE 3
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES ON INTELLIGENCE OF B+ BLOOD GROUPS OF MALE AND FEMALE SPORTSPERSONS

Blood Group	Sex	N	Mean	Mean	MD	σ DM	t-ratio
B+	Male Female	34 38	66.71 63.39	66.71 63.39	3.32	3.13	1.06

Significant at .05 level, t.05 (70) = 2.00

Table 3 shows that the statistically insignificant difference was found between male and female sportspersons of B+ blood group in their intelligence, as the obtained t-value of 1.08 was less than the required t.05 (70)= 2.00.

TABLE 4
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES ON INTELLIGENCE OF AB* BLOOD GROUPS OF MALE AND FEMALE SPORTSPERSONS

Blood Group	Sex	N	Mean	Mean	MD	σ DM	t-ratio
AB+	Male Female	19 21	55.11 52.38	55.11 52.38	2.73	4.70	0.58

Significant at .05 level. t.05 (38) = 2.02

Table 4 shows that the statistically insignificant difference was found between male and female sportspersons of AB+ blood group in their intelligence, as the obtained t-value of 1.08 was less than the required t.05 (38)= 2.02.

TABLE 5
SIGNIFICANCE OF DIFFERENCE BETWEEN MEAN SCORES ON INTELLIGENCE OF O+ BLOOD GROUPS OF MALE AND FEMALE SPORTSPERSONS

Blood Group	Sex	N	Mean	Mean	MD	σ DM	t-ratio
O+	Male Female	65 60	62.82 58.53	62.82 58.53	4.29	2.14	1.99*

Significant at .05 level, t.05 (123) = 1.98

It is clearly evident from Table 5 that the statistically significant difference was found between male and female sportspersons of O+ blood group in their intelligence, as the obtained t-value of 1.99 was high than the required t.05 (123)= 1.98.

4. DISCUSSION

Descriptive statistics of intelligence of male and female sportspersons of different blood groups indicated the difference in their mean scores, as the Female sportspersons of A+ blood group were found to have greater amount of intelligence than their counter parts. In case of Male sportspersons of B+, AB+ and O+ blood group, they were found to have greater amount of intelligence than females. The result of t-ratio indicated the insignificant between mean scores on intelligence of male and female sportsperson in A+, B+, and AB* blood group. But they had exhibited the the significant difference in their intelligence. A blood group female sportspersons were more intelligent than their counter parts. Where as male sportspersons of B+, AB+ and O+ were found more intelligence.

5. CONCLUSIONS

1. Female sportspersons of A+ blood group were found to have greater amount of intelligence than their counter parts
2. Male sportspersons of B+, AB+ and O+ blood group were found to have greater amount of intelligence than females.
3. Male and female sportspersons of A+, B+ and AB+ blood groups did not differ significantly in their intelligence.
4. Male and female sportspersons of O+ blood group had significant difference in their intelligence.

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