

CHAPTER VANALYSIS AND INTERPRETATION OF THE DATA

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The pages that follow in this chapter present the tabulated data alongwith its discussion.

Table :1: Distribution of Subjects according to Districts

Sr. No.	Districts in the State of Gujarat	No. of superior Boys	No. of superior girls	No. of superior adults
1.	Bulsar	3	8	1
2.	Dang	1	-	-
3.	Surat	70	19	16
4.	Broach	8	1	-
5.	Baroda	22	5	3
6.	Panchmahals	10	-	2
7.	Kaira	18	4	1
8.	Ahmedabad	21	3	1
9.	Bhavnagar	7	-	2
10.	Amreli	2	-	1
11.	Junagadh	2	-	2
12.	Jamnagar	4	-	1
13.	Rajkot	3	-	1
14.	Surendranagar	3	-	1
15.	Mehsana	16	-	2
16.	Kutch	1	-	-
17.	Banaskantha	6	-	-
18.	Sabarkantha	3	-	-
Total		200	40	34

The table consists of the figures of the superior subjects in 18 districts of the Gujarat State. It is apparently evident that most of the superior boys belong to the district of Surat, Baroda and Ahmedabad. The aggregate of the superior students belonging to aforesaid 3 districts is 113 from among whom 70 belong to Surat district. The rest of the students pertaining to this category belong to the remaining fifteen districts.

In the case of superior girls it is again observed that the above mentioned three districts have made a prominent contribution, as number of such subjects coming from these 3 districts is 27, which is 67.5% of the aggregate. Contribution of the other three districts is 32.5% only. It is strikingly noteworthy that no superior girl comes from the rest of the 12 districts.

Trying to find out the data for superior adults, it can be deduced that the above mentioned 3 districts stand on an equal footing in imparting more than 50% of the total number of superior adults. The district of Surat occupies its outstanding position as 16 superior adults belong to it. Baroda stands next to it, giving a share of 3 superior adults.

Table :2: Information regarding Fathers of the Subjects

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Alive	175 (87.5)	81 (90.0)	37 (92.5)	60 (100.0)	11 (32.3)
Dead	23 * (11.5)	9 (10.0)	3 (7.5)	-	23 (67.7)

\* (Two superior boys have not given the information  
Number in parantheses shows the percentages.)

On the examination of the above table, we find that 87.5% of the superior boys and 90% of average boys have their fathers alive.

When the same data is observed in the case of girls, we find that 92.5% of the superior girls and 100% of average girls have their fathers alive.

Thus looking to the above data we can conclude that most of the pupils either superior or average are lucky and enjoy the protection of their fathers.

In the case of superior adults we find that only 32.3% of them have their fathers alive.

Table :3(A): Education of Fathers of Boys

Kind	Boys		Differ- ence in percen- tage	Calculated t Score	Signifi- cance
	Sup.	Ave.			
Illiterate	4 (2)	4 (4.4)	(2.4)	1.16	No
With Elementary Education	58 (29)	43 (47.7)	(18.7)	3.09	Yes
With Secondary Education	75 (37.5)	35 (38.9)	(1.4)	0.23	No
With University Education	63 (31.5)	8 (8.8)	(22.7)	4.16	Yes
Total	200	90			

In Table 3(A) we find that the percentage of superior boys who have university educated fathers is 31.5 which is much more than the corresponding percentage in the case of average boys which is only 8.8. If we

analyse the difference between these two percentages statistically we find that this difference is highly significant showing that the percentage of superior boys having university educated fathers is much greater than the corresponding percentage in the case of average boys.

This shows that the percentage of superior boys having illiterate fathers is only 2 and the percentage of average boys who have illiterate fathers is 4.4. The percentage of average boys with illiterate fathers is more than that of the superior boys. But it is not possible to compare in this case the two percentages and draw a valid conclusion which can be statistically confirmed, as the frequencies are very small. However, there is some evidence showing that the illiterate fathers tend to have larger percentage of average boys, but the difference is not statistically significant.

In the second category, we find that, 29% of superior boys and 47.7% of the average boys come from the families having elementary educated fathers. This shows that the percentage of average boys having elementary educated fathers is much more than the corresponding percentage in the case of superior boys. If we analyse the difference between these two percentages statistically we find that this difference is significant, showing

that the percentage of superior boys having elementary educated fathers is much less than the corresponding percentage in the case of average boys.

The third category indicates that 37.5% of superior boys and 38.9% of average boys have fathers with secondary education. Here the percentage of average boys is slightly more than the corresponding percentage in the case of superior boys. When the difference between these two percentages is tested for its significance by a t test we find the value 0.2292 which is not significant. Hence we can conclude that there exists no difference between the two percentages. Hence secondary educated fathers tend to have equal percentage of superior and average boys.

We may, therefore, come to the conclusion that the university educated fathers tend to give greater percentage of superior boys than the average boys while this is not so in the case of fathers without university education. We can take the 2nd, 3rd and 4th levels of education and analyse the data in the form of 3 x 2 table for independence by  $\chi^2$  test. We find that  $\chi^2 = 19.42$  for 2 degrees of freedom which is highly significant. This shows that the education of fathers has positive effect on the percentage of superior boys. Our previous conclusion is therefore confirmed. The Table 3(A) shows that the percentage of superior boys increases while the percentage of

average boys decreases, with the increase in the level of education of the father. But we also find from the data that superior boys come in very small percentage from fathers having no education.

Table :3:(B) Education of Fathers of Girls

No.	Kind	Girls		Diff.in percent- age.	Calculated t Score	Signifi- cance
		Sup.	Ave.			
1.	Illiterate	-	4 (6.6)	(6.6)	1.658	No
2.	With Ele- mentary Education	4 (10)	12 (20)	(10)	1.337	No
3.	With Secon- dary Educa- tion	6 (15)	20 (33.3)	(18.3)	3.306	Yes at 0.05 level
4.	With University Education	30 (75)	24 (40)	(35)	3.442	Yes
	N	40	60			

The above table regarding the levels of education of the fathers of girls shows that the percentage of superior girls with university educated fathers is 75, and that of the average girls is 40. The difference between the two percentages is 35. The difference is high and if we analyse the difference statistically we find that the difference is highly significant, showing that the superior girls having university educated fathers is much greater in percent

than the corresponding percentage in average girls.

Referring to the first category in the table 3(B), we find that the percentage of superior girls with fathers illiterate is zero in our sample, the percentage of average girls with illiterate fathers being 6.6. It is not possible to compare in this case the two percentages and draw a valid conclusion, which can be statistically confirmed, as the frequencies are very small. However, there is some evidence showing that illiterate fathers tend to have very large percentage of average girls.

The category of fathers of average girls with elementary or secondary education points out that in the cases the percentages of superior girls is less than that of average girls. On analysing statistically, we find that among fathers with elementary education, the percentages of superior and average girls are 10 and 20 which are not significantly different. But in the case of fathers with secondary education the percentages are 15 and 33, which are significantly different at 5% level, though it is not statistically confirmed, there is evidence here showing that the percentages of average girls with fathers having elementary or secondary education is greater than the same percentage of superior girls.

We may therefore conclude that university education of the fathers tends to give greater percentages of superior girls, the reverse being the case in girls with illiterate fathers, or fathers having elementary or secondary education.

On taking the last three categories of fathers and analysing the data given in the form of 3 x 2 table for independence by  $\chi^2$  test, we get the value that  $\chi^2 = 9.7982$  with 2df, which is significant. This shows that the education of fathers has a positive effect on the percentage of superior girls.

Our previous conclusion is therefore confirmed. But by our previous analysis we could show that the effects of education of fathers on the percentages of superior girls are opposite in the category of fathers with university education and the remaining three categories of illiterate fathers, those with elementary and secondary education.

We find that the percentages of superior girls to average girls increases with the increase in the level of education of the father. This tendency is the same as in the case of boys. We also find that the superior girls came in much larger percentages almost threefourths from university educated fathers and unlike boys, they do not

come in equal percentages from fathers with elementary education, secondary education and university education.

Table :3:(C) Education of Mothers of Boys

No.	Kind	Boys		Difference in Percentage	Calculated t Score	Significance
		Sup.	Ave.			
1.	Illiterate	51 (25.5)	26 (28.8)	(3.3)	0.5889	No
2.	With Elementary Education	118 (59)	57 (63.3)	(4.3)	0.6926	No
3.	With Secondary Education	25 (12.5)	7 (7.7)	(4.8)	1.280	No
4.	With University Education	6 (3.0)	-	(3.0)	1.661	Yes at 0.05 level
N		200	90			

Examining the Table 3(C) we see that 25.5% of superior boys and 28.8% of average boys have mothers who are illiterate. The percentage of average boys is slightly larger than the corresponding percentage in the case of superior boys. When the differences in the two percentages is tested for significance, it is found to be not significant. Hence we can conclude that the illiterate mothers may have raised both the types of boys.

In the case of boys whose mothers have received elementary education the percentages of superior and

average boys are 59% and 63.3% respectively. Here it can be noted that the percentage of average boys is larger than that of the superior boys. When the difference between the two percentages is tested for the significance, it is found that the difference is not significant. Here also we can confirm our previous conclusion and can say that the mothers having elementary education may have both the types of boys.

When the category of secondary education of mothers is examined it is found that the percentage of superior boys is 12.5 and the corresponding percentage of average boys is 7.7. The superior boys who have mothers with secondary education is larger than that of the average boys. Here we find quite a reverse picture compared to the above two categories. When the difference between these two percentages is tested for its significance, it is found to be not significant. Hence our previous conclusion is confirmed, though the case is reversed, i.e. the superior as well as the average boys come from the mothers who have received secondary education. There is an evidence of higher percentage in the case of superior boys.

Looking to the category of mothers with university education, we find that 3% of superior boys come from

mothers having university education, whereas the corresponding percentages of average boys, in this case is zero. Here also there is an evidence of larger percentage of superior boys having mothers with university education. The difference between the two, is found to be significant at 0.05 level. Hence it can be concluded that university educated mothers tend to have superior boys.

To get the correct picture of the above conclusions, a  $\chi^2$  test is applied to this data. The data is arranged in 3 x 2 table omitting the category of university educated mothers as the frequencies are very small or nil. The value of  $\chi^2$  is found to be 1.63715 which is not significant. This shows that the education of the mother and the superiority of the child are independent of each other. From the data it can be seen that more than 75% of the superior boys come from either illiterate mothers or those with elementary education.

The table No. 3(D) pertaining to the Education of the Mothers of Girls is following on the next page.

Table:3(D): Education of Mothers of Girls

Kind	Girls		Diff. %	Calculated t Score	Signifi- cance
	Sup.	Ave.			
Illiterate	6 (15)	16 (26.6)	(11.6)	1.04	No
Elementary Education	15 (37.5)	44 (73.3)	(35.8)	3.6	Yes
Secondary Education	13 (32.5)	-	(32.5)	-	-
University Education	6 (15)	-	(15.0)	-	-
<u>Total</u>	<u>40</u>	<u>60</u>			

Looking to the above table, we find that the percentage of superior girls who have illiterate mothers is 15 and the corresponding percentage of average girls is 26.6. This shows that the percentage of average girls is much larger than that of the superior girls. When the difference of (11.6%) between the two groups is analysed statistically it is found that it is not significant. Hence we can conclude that the illiterate mothers tend to have both the types of girls.

When the data of the second category of mothers having Elementary education is looked into, it is observed that 37.5% of superior girls and 73.3% of average girls come from the mothers who have received elementary education. This shows that the percentage of average girls is greater than the corresponding percentage of superior girls.

When this difference in the two groups is tested for its significance it is found to be highly significant. Here we can conclude that the elementarily educated mothers tend to have a greater number of average girls.

In the third category of mothers who have received secondary education, the percentage of superior girls is 32.5 whereas the corresponding percentage of average girls is zero. This shows that the percentage of superior girls whose mothers have received secondary education is much larger than that of the average girls. The difference between the two is evidently high but this cannot be analysed statistically as the frequency is zero in one of the two cases.

In the fourth category of university educated mothers we find that the percentage of superior girls is 15 and the percentage of average girls is zero. This also shows that the percentage of superior girls is much larger than that of the average girls. This difference between the two percentages also cannot be analysed statistically as the frequency is zero in one of the two cases. However, there is an evidence of larger percentage of superior girls having university educated mothers or mothers with secondary education.

If we recast our data in the two categories i.e. illiterate and literate mothers and analyse the data by  $\chi^2$  test, we find that  $\chi^2$  is 1.9 with one degree of freedom. This value is found to be not significant. This shows that the superior as well as average girls come from each of the categories of the mothers. Mothers with secondary education or university education have a higher percentage of superior girls. It can also be seen that the percentage of average girls goes on increasing with the level of education while this trend is not marked in the case of superior girls.

Table :4: Yearly Income of Fathers

	Boys		Girls		Terman's Result
	Sup.	Ave.	Sup.	Ave.	
Rs.1000-2000	83 (41.5)	61 (67.7)	5 (12.5)	12 (19.9)	8
2000-3000	47 (23.5)	6 (6.6)	5 (12.5)	8 (13.3)	52
3000-4000	21 (10.5)	4 (4.4)	2 (5.0)	12 (20.0)	30
4000-5000	10 (5.0)	16 (17.7)	6 (15.0)	12 (20.0)	19
5000-6000	17 (8.5)	-	5 (12.5)	12 (20.0)	15
6000-7000	-	-	1 (2.5)	-	12
7000-8000	3 (1.5)	2 (2.2)	1 (2.5)	-	5
8000-9000	5 (2.5)	-	-	-	5
9000-10000	7 (3.5)	1 (1.1)	4 (10.0)	-	2
10000-11000	-	-	-	-	8
11000-12000	3 (1.5)	-	8 (20.0)	-	3
12000-13000	-	-	-	-	4
13000-14000	-	-	-	-	7
14000 and above	4 (2.0)	-	3 (7.5)	4 (6.6)	-
N	200	90	40	60	170

Mean Income of Superior Group	:	Rs. 3,054.1			
Average Group	:	Rs. 1,833.3			
	Mean	:	S.D.	:	N
Superior Group	Rs. 3054.1		32.94		240
Average Group	Rs. 1833.3		24.73		150
Difference	Rs. 1220.8				
Terman's Result	£ 4705		3805		170
Superior $SE_M$	=	$\frac{S.D.}{\sqrt{N}}$	=	232.9	
Average $SE_M$	=	$\frac{S.D.}{\sqrt{N}}$	=	201.9	
Critical Ratio t	=	$\frac{D}{oD}$	=	10.25	

An examination of the above table shows us that 41.5% of superior boys and 67.7% of average boys come from the fathers whose yearly income lies in the first income group i.e. Rs. 1000 - 2000. When the second income group is examined it is found that 23.5% of superior boys and 6.6% of average boys come from this group. The third income group (i.e. Rs. 3000-4000) shows 10.5% of superior boys and 4.4% of average boys. Similarly the corresponding percentages in the next income group of Rs. 4000-5000 are 5% and 17.7% respectively. A summing up of the frequencies in these four groups shows that out of 200 superior boys 161 i.e. 80.5% belong to the first four groups of income of the fathers. Whereas the corresponding summation, in the case of average boys, tends to be 87 (i.e. 96.6). We can

say that 80.5% of superior boys and 96.6% of average boys belong to the low income group (as shown in Table 4(A)).

When the succeeding groups are considered, we find that 8.5% of superior boys belong to the fifth income group (i.e. Rs. 5000 - 6000), the corresponding percentage for the average boys is zero. The income group of Rs. 6000 - 7000 does not have any student. The income group of Rs. 7000-8000 shows 1.5% of superior boys and 2.2% of average boys.

Table :4:A: Income Groups of (Boys & Girls) Fathers

No.	Group	Boys		Girls		Difference	
		Sup.	Ave.	Sup.	Ave.	Boys	Girls
1.	Low Income (Below Rs. 5000)	161 (80.5)	87 (96.6)	18 (45)	44 (73.3)	(16.6)	(28.3)
2.	High Income (Above Rs. 5000)	39 (19.5)	3 (3.4)	22 (55)	16 (26.7)	(16.6)	(28.3)
	N	200	90	40	60		

The income groups of Rs. 9000 and above show that the percentage of superior boys is 7% and the corresponding percentage of average boys is only 1.1%. These groups are taken up together and named high income group (i.e. Rs. 5000 and above), we find that 19.5% of superior boys belong to this group whereas the corresponding percentage of

average boys is only 3.4%. The aggregate analysis of the same is shown in Table 4(A).

Similarly when we look into the case of girls we find that 12.5% of superior girls and 19.9% of average girls belong to the first income group i.e. (Rs. 1000-2000). The income group of Rs. 2000-3000 shows 12.5% of superior girls and 13.3% of average girls. The third income group shows 5% and 20% respectively. The recorded percentages in the fourth group are 15% and 20% respectively. When these groups are categories as a low income group, we find that 45% of superior girls and 73.3% average girls belong to this category.

When the income groups taken succeeding the above considered similarly, we find that 12.5% of superior girls and 20% of average girls belong to the income group of Rs. 5000 - 6000. And thereafter in other groups of income we find that 42.5% of superior girls and the corresponding percentage in the case of average girls is zero.

When these groups are categorized as high income group, the result is that 55% of superior girls and 26.7% of average girls belong to this group.

When from Table 4 mean incomes of the two groups superior pupils and average pupils were found out, they were Rs. 3054.1 and Rs. 1833.3 respectively. When S.Ds. of these two means were calculated the obtained values were

32.94 and 24.73 respectively and when  $t$  was calculated it was found to be 10.25 which is significant. This leads us to conclude that the income of fathers has a positive bearing on the superiority of the children.

When the whole data is arranged according to Table 4(A) for the calculation of  $\chi^2$  it was found in the case of superior and average boys to be 13.10 which is highly significant. This also leads us to the same conclusion that the income of the fathers has a positive bearing on the superiority of their children.

When the same data, in the case of girls is analysed statistically, it is found to be 8.175 which is also highly significant. Hence it also confirms our previous conclusions.

Table :5: Occupational Classification of Fathers

Occupational Group *	Boys		Girls		Adults	Terman's Results
	Sup.	Ave.	Sup.	Ave.	Sup.	
I Professional	55 (27.5)	17 (18.8)	19 (47.5)	28 (46.6)	10 (29.4)	(31.4)
II Semi-Professional	77 (38.5)	4 (4.4)	15 (37.5)	8 (13.3)	7 (20.6)	(50.0)
III Clerical Skilled	27 (13.5)	19 (21.1)	6 (15.0)	4 (6.6)	9 (26.4)	(11.8)
IV Farming and other agricultural pursuits	36 (18.0)	31 (34.4)	-	20 (33.3)	8 (23.5)	
V Semi-skilled Trades	3 (1.5)	18 (20.0)	-	-	-	(6.8)
VI Slightly Skilled Workers	-	-	-	-	-	
VII Day Labourers Unskilled	2 (1.0)	1 (1.1)	-	-	-	

\* Appendix 8

Looking at the above table, we find that 66% of superior boys and 23.2% of average boys come from the fathers having first two levels of occupations, and 34% of superior boys and 76.87% average boys come from the fathers who are in the occupational groups from 3 to 7. This shows that the superior boys come in higher percentages from the fathers who are in the first two occupational groups than that of the average boys. Hence it can be noted that the fathers having higher professional status tend to have superior boys.

When the same data has been observed in the case of girls, it can be seen that 85% of superior and 59.9% of average girls come from the fathers belonging to the first two occupational groups, while 15% of superior and nearly 39.9% of average girls come from the fathers coming from the rest of the occupational groups. This indicates that the superior girls come in higher percentage from fathers having high occupational level than that of the average girls. Hence we can draw the conclusion that the fathers having higher professional status tend to have superior girls.

From the above discussion, it can be seen that, higher the occupational status of the father, the higher the percentage of superior children.

To confirm the above statement  $\chi^2$  is calculated for both the sexes. For the process of calculation the seven categories of occupations are reduced to only two categories. The first two groups are put together in one group and the rest of the occupational levels of fathers are merged in the second group. Thus reducing the data for the boys as well as girls into 2 X 2 tables. The  $\chi^2$  for boys is found to be 45.35 and the  $\chi^2$  for girls is found to be 7.144. Both these  $\chi^2$  are highly significant. Hence we can confirm the above fact and we can infer that the superior children tend to come in higher percentages from the fathers having higher professional levels.

Observing the category of superior adults we realise that 50% of them belong to the first two categories of the occupational groups of fathers and 50% of them belong to the fathers who are in the 3rd and 4th groups of occupations, and they do not come from fathers having the 5th, 6th or 7th group of occupations. Consequently, we can say that, in the past, superior pupils did not come from the fathers having very low occupations while the superior boys, at present, do come from the fathers having the lower occupational groups.

When the data of superior boys and superior adults is analysed for testing independence it is found that  $X^2$  in 2 x 2 table, as above, is 3.218, which is not significant. Hence we can draw the inference that the superior children of today tend to come in higher percentages from the same groups of occupations from which superior pupils of the past were coming.

Table :6: Information Regarding Longevity of Mothers

No.	Kind	Boys		Girls		Adults
		Sup.	Ave.	Sup.	Ave.	Sup.
1.	Kin(alive)	185 (92.5)	87 (96.6)	40 (100.0)	56 (93.3)	11 (32.3)
2.	Step(alive)	5 (2.5)	2 (2.2)	-	4 (6.7)	-
3.	Dead	4 (2.0)	1 (1.1)	-	-	23 (67.7)
4.	Not Responded	6 (3.0)	-	-	-	-

The above table shows the data about the longevity of the mothers of the subjects. This table reveals that 92.5% of superior and 96.6% of average boys have kin mothers and they are alive. The percentage in the case of average boys is slightly larger than that of the superior boys.

When the second category is observed, it is found that 2.5% of superior and 2.2% of average boys have step

mothers, who are alive. The difference between two percentages is very low. It can be said to be negligibly small.

When the third category is seen it is found that 2% of superior and 1.1% of average boys have their mothers dead. Hence from this data we can conclude that most of the boys either superior or average enjoy the supervision and care of their mothers.

In the case of girls, we find that 100% of superior girls have kin mothers who are alive. While the corresponding percentages of the average girls in this case is 93.3%. The difference between the two percentages is not very high. The second category shows that 6.7% of average girls have step mothers who are alive. Hence from this data also we can conclude that most of the girls either superior or average are looked after by their mothers.

In case of superior adults we find that only 32.3% of them have their mothers alive.

Table :7: Professional Status of Mothers

No.	Kind	Boys		Girls		Adults
		Sup.	Ave.	Sup.	Ave.	Sup.
1.	Employed	17 (8.5)	3 (3.3)	-	4 (6.7)	
2.	Unemployed	183 (91.5)	87 (96.6)	40 (100)	56 (93.3)	34 (100)

The above table indicates that 8.5% of superior boys and 3.3% of average boys have their mothers employed in

some professions whereas 91.5% of superior and 96.6% of average boys have their mothers not employed in any profession. The difference between these two percentages is very low (i.e. 5.2%).

In the case of girls we find that the superior girls have their mothers not employed in any profession and 6.7% of average girls have their mothers employed in some profession. The difference between these two percentages is very low ( i.e. 6.7% ).

The above data signifies that most of the mothers either of superior group or of average group are not employed in any profession, but are engaged in the household work.

Table :8: Participation of Parents in Social Activities

	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
1. Yes	51 (25.5)	12 (13.3)	15 (37.5)	16 (26.6)
2. No	149 (74.5)	78 (86.7)	25 (62.5)	44 (73.4)

Table :8: (A)

Kind of Activity	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
1. Social	40	9	9	15
2. Educational	8	3	3	1
3. Religious	3		3	
	51	12	15	16

This table reveals that 25.5% of the parents of superior boys and 13.3% of parents of average boys take part in social activities. The difference between the two percentages is 12.2. This difference seems to be high and when this is tested for its significance by  $\chi^2$  test in the form of 2 x 2 table, it is found that the  $\chi^2$  is 5.722 which is highly significant. We can conclude that the parents of superior boys participate in larger percentages in social activities, compared to those of the average boys.

When the data is observed in the case of girls, we find that 37.5% of the parents of superior girls and 26.6% of the parents of average girls participate in social activities. The difference between the two percentages is 10.9. This is a marked difference and when this is tested for the significance by a  $\chi^2$  test, it is found that  $\chi^2$  is 1.317. This is not significant. Hence we can conclude that the parents of superior girls do not participate in larger percentage than those of the average girls. From the above two conclusions, we can generalise that the parents of superior pupils participate in larger percentages in the social activities compared to the average pupils.

Table 8(A) : This table reveals the analysis of the fields of activities participated by the parents of the pupils.

Out of 51 parents of superior boys 40 participated in social, 8 in educational and 3 in religious activities.

In the case of average boys we find that out of 12 parents, 9 participated in social activities and 3 participated in educational activities.

Looking to the data about the girls we find that out of 15 parents of superior girls, 9 participated in social, 3 in educational and 3 in religious activities. Whereas out of 16 parents of the average girls, 15 participated in social activities and 1 participated in educational activities.

Table:9: Distribution of Subjects according to Castes

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
1. Brahmin	46 (23)	18 (20)	16 (40)	24 (40)	13 (37.6)
2. Bania	67 (33.5)	15 (16.6)	15 (37.5)	16 (26.6)	14 (41.4)
3. Rajput	-	-	-	-	-
4. Patidar	34 (17)	25 (27.7)	4 (10)	12 (20)	4 (11.7)
5. Goldsmith or Barber	24 (12)	6 (6.6)	-	-	2 (5.9)
6. Parsi	3 (1.5)	3 (3.3)	1 (2.5)	-	-
7. Muslim	6 (3)	-	1 (2.5)	-	-
8. Christian	6 (3)	5 (5.5)	-	-	-
9. Ganchi	14 (7)	2 (2.2)	3 (7.5)	-	-
10. Backward Class	-	16 (17.7)	-	8 (13.2)	-

On examining the above table, it can be seen that 23% superior boys and 20% of average boys come from the caste of Brahmins. The difference between the two percentages is 3. This gives us an evidence that the superior boys come in slightly higher percentages than that of the average boys from the caste of Brahmins.

When the caste of Bania is observed, it can be perceived that 33.5% of superior boys and 16.6% of average boys belong to this caste. The difference between the two percentages is 16.9. This difference is very high. Hence we can say that the superior boys come in higher percentages compared to that of the average boys from this caste.

In the case of the caste of Patidars, we find that 17% of superior boys and 27.7% of average boys come from this class. The difference between these two percentages is 10.7. This difference is also very high. This leads us to conclude that the superior pupils tend to come in less percentages compared to average boys from the caste of Patidars.

When the fifth category is observed, we find that 12% of superior boys and 6.6% of average boys come from this caste of Goldsmiths or Barbers. The difference between the two percentages is only 5.4, which is not very high but still this bears an evidence that the superior

boys come in higher percentages from this caste than those of the average boys.

If we combine the first five categories in one group and the next five categories in the second group it is interesting to note that 85.5% of superior boys come from the first five categories of castes. While only 14.5% of superior boys come from the next five categories of castes. When the percentages are viewed in case of average boys, it is found that 71.1% of them belong to the first group of castes and only 28.9% of them belong to the second group of castes. This leads us to conclude that a high percentages of boys come from the first five categories.

If we analyse the difference in percentages of the first group of five castes, statistically and  $\chi^2$  is calculated, it is found that the value of  $\chi^2$  is 9.90264, which is highly significant with 1 df. Hence we can infer that the superior boys tend to come in higher percentages from the families belonging to these castes.

While the difference in the ( ) percentages of the superior and average girls belonging to the group of first five categories of castes is analysed statistically and the  $\chi^2$  is calculated, it is found that the value of  $\chi^2$  is 5.182808, which is significant. So we can

conclude that superior girls come in greater percentages from these groups than the percentages of average girls.

Looking to the group of next five castes it becomes evident that no average girl comes from the said group, whereas superior girls do come from this group. Hence girls coming from these castes are generally rare and whosoever comes possess superior ability.

In case of superior adults, we find that 79% of them come from either Brahmin or Bania community and only 18% of them come from the other three categories of the first five castes. 97% of them come from the first five castes' group. Hence it can be said that in the past pupils came from higher castes group only.

Table :10: Distribution of Pupils According to Religion

Religion	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
1. Zohrastrianism	3 (1.5)	3 (3.3)	1 (2.5)	-
2. Islam	6 (3)	-	1 (2.5)	-
3. Jainism	25 (12.5)	9 (9.9)	7 (17.5)	4 (6.7)
4. Hinduism	159 (79.5)	73 (81.3)	31 (77.5)	56 (93.3)
5. Shikhism	1 (0.5)	-	-	-
6. Christianity	6 (3)	5 (5.5)	-	-
N	200	90	40	60

Looking to the above table we find that the pupils generally come from the families observing six religions. The religions are Hinduism, Jainism, Islam, Christianity, Zohrastrianism and Shikhism.

In the case of superior boys, we find that 79.5% of them come from Hinduism and 12.5% of them come from Jainism. Thus 92% of them belong to these religions, while only 8% belong to the remaining religions.

In the case of average boys also we can note that 81.1% of them come from Hinduism while 10% of them come from Jainism. This makes a total of 91.1%. 8.9% of them come from the rest.

Looking to the data for the superior girls we find that 77.5% of them belong to Hinduism and 17.5% belong to Jainism. Hence we can find 95% of them belong to either Jainism or Hinduism. While only 5% belong to other groups of religion. In the case of average girls we find that 93.3% of them belong to Hinduism and 6.7% of them belong to Jainism. This shows that no average girl comes from the other religions. This leads us to conclude that more than 90% of the pupils come from the families observing either Hinduism or Jainism.

Table :11: Influence of Religion Book or Philosophy

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Yes	34 (17)	16 (17.7)	6 (15)	-	18 (52.9)
No	166 (83)	74 (82.3)	34 (85)	60 (100)	16 (47.1)

The above table reveals that only 17% of superior boys and 17.7% of average boys are influenced by either religion, book or philosophy, while 83% of superior boys and 82.3% of average boys are not affected by the same.

When we observe the case of girls, we find that only 15% of superior girls are influenced by the above mentioned factors, while 85% of superior girls and 100% of average girls are not affected by the same.

The percentage of superior adults impressed by the above factors is 52.9% while 47.1% of the superior adults are not affected by these factors.

The difference between the percentages of boys is only 0.7. When this difference was tested statistically by  $\chi^2$  test we observed the value of  $\chi^2 = 0.02631$ , which is not significant. Hence we can conclude that these attributes do not affect the superiority of the boys.

The difference between the percentages of girls is 15. This is a high difference but the corresponding

percentage in the case of average girls being zero, it is not possible to draw any valid conclusion.

The percentage of superior adults who are influenced by these factors is higher than that of the uninfluenced.

Table :12: Breakdown of Influences.

Kind	Superior Boys	Average Boys	Superior Girls	Average Girls	Superior Adults.
1. Teacher	5 (14.7)	2 (12.5)	1 (16.6)	-	-
2. Philosophy	29 (85.3)	14 (87.5)	5 (83.4)	-	7 (38.9)
3. Book	-	-	-	-	6 (33.3)
4. Religion	-	-	-	-	5 (27.8)

When the influences are analysed into the categories like teacher or philosophy, it is found that out of 34 superior boys who are influenced by the above factors only 5 superior boys are affected by teachers and 29 boys are affected by some philosophy. The number of average boys in the same categories are 2 and 14 respectively. When these breakdown of influences are tested for their difference and statistical analysis is carried out  $\chi^2$  is found to be 0.04. Hence we can conclude that the difference in percentages of superior and average boys in these categories is not significant. Hence it may be inferred that the two groups of boys are equally affected by these influences.

When the same breakdown of influences is analysed, in the case of superior girls, it is found that all of them are influenced by teachers. The  $\chi^2$  is not calculated in this case because the frequency in the case of average girls is zero. Still there is evidence that superior girls are influenced by such factors, which do not affect the average girls.

But the percentages in different categories show some evidence.

We can say that superior boys are more affected by the teacher than the average boys and it can be said that the superior boys are less affected than the average boys by philosophy.

Out of 18 superior adults 7 are affected by philosophy, 6 by books and 5 by religion.

Table :13: Instances of Progress.

Kind	Superior:Average Boys	: Superior:Average Boys	Superior:Average Girls	: Superior:Average Girls	Superior Adults.
Yes	59 (29.5)	6 (15)	7 (17.5)	-	19 (55.9)
No	131 (65.5)	84 (85)	33 (82.5)	60 (100)	15 (44.1)
Not Responded.	10. (5)	-	-	-	-

The above table reveals that 29.5% of superior boys and

15% of average boys are affected by the instances of progress while 65.6% of superior boys and 85% of average boys are not affected by the same. When this data is analysed statistically and  $\chi^2$  is calculated it is found that the  $\chi^2$  is 20.37, which is highly significant. Hence we can conclude that the effect of instances of progress is related to the categories of superior and average students. Such effect is greater in superior boys.

When we look at the same data for the girls we find that 17.5% of superior girls are affected by the instances of progress and no average girl is found to be affected by the same.

If we compare the superior boys and the superior adults we find that the superior adults were more affected by the instances of progress than the superior boys. This conclusion is drawn from the fact that the  $\chi^2$  is 7.83, which is highly significant.

Table : 14: Instances of Hindrance.

Kind.	Superior:Average:		Superior:Average:Superior		
	Boys	Boys	Girls	Girls	Adults.
Yes	58 (29)	20 (22.2)	6 (15)	8 (13.3)	9 (26.4)
No	142 (71)	70 (77.8)	34 (85)	52 (86.3)	25 (73.5)

From the examination of the above table we can see that 29% of superior boys and 22.2% of average boys say that their progress is hindered and 71% of superior boys and 77.8% of average boys say that their progress is not hindered. Both these results are analysed statistically and  $\chi^2$  is calculated. The calculated  $\chi^2$  value is found to be 1.45. This value is not significant. Hence we can conclude that instances of hindrance have no bearing upon the superior or average ability. Still there is an evidence of higher percentages in the case of superior boys compared to average boys.

When the same data has been tested in case of girls, it is found that 15% of superior girls and 13.3% of average girls say that their progress is hindered but 85% of superior girls and 86.3% of average girls are not affected by the same. This data shows us that the percentage of superior girls is more than those of the average girls. When this difference is tested statistically and when the two groups were compared it is found that the calculated value of  $\chi^2$  is 0.05538, which is not significant. Hence the two groups do not differ so much in this attribute. So we can confirm our previous conclusion.

In the case of superior adults we find that out of 34 superior adults only 9 are affected by the instances

of hindrance and 25 are not affected by the same. When this data of superior adults is compared with that of the superior boys group, and  $\chi^2$  is calculated, it is found that the value of  $\chi^2$  is 0.09097, which is not significant. Hence we can infer that the present generation of superior pupils do not differ so much with the past generation of superior pupils in this attribute.

Hence from the above discussion we can say that the instances of hindrance have very little effect on superiority of an individual or the superior individuals can make enough progress inspite of hindrances.

Table 15: Distribution of Subjects According to Personality Defects

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Yes	66 (33)	22 (24.5)	8 (20)	8 (12.5)	17 (50)
No	134 (67)	68 (75.5)	32 (80)	52 (87.5)	17 (50)

The above table reveals that 33% of superior boys and 24.5% of average boys feel that they have some personality defects. 67% of superior boys and 75.5% of average boys do not feel any personality defects. When this situation is further analysed statistically, it is

found that the value of  $\chi^2$  obtained is 2.169. This obtained value of  $\chi^2$  is found to be not significant. Hence we can conclude that there exists no difference between the two groups for this attribute.

In the case of girls, when the same data is observed, we find that the percentage of superior girls is more than the average girls admitting the presence of personality defects. This difference is tested for its significance by a  $\chi^2$  test in 2 x 2 table, we find the  $\chi^2$  value 0.7934, which is not significant. Hence we can conclude that the two groups do not differ so much in this attribute. Hence we can confirm the above conclusion.

When the same data about the superior adult is compared with that of the superior boys group, we find that the percentage in case of superior adults is higher than that of the superior boys group. This data is analysed statistically and  $\chi^2$  value is obtained. The obtained value of  $\chi^2$  is 3.669, which is not significant. Hence we can confirm the above statement and can finally infer that the two groups stand at par as regards this attribute.

Hence we can say that the superior pupils as well as average pupils are affected by this attribute of personality defect but the sufferance of the same does

not make remarkable difference between the two groups.

The defects of following types are enumerated by the subjects:

Shyness : Physical Immaturity  
 Inferiority Complex : Indecisiveness  
 Anger : ...

Table :16: Family Background of Subjects

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Joint	104 (52)	43 (47.7)	13 (32.5)	8 (13.4)	9 (26.5)
Divided	96 (48)	47 (52.3)	27 (67.5)	52 (86.5)	25 (73.5)

On examination of the above table we find that 52% of superior boys and 47.7% of average boys come from joint families, while 48% of superior boys and 52.3% of average boys come from divided families. The percentage of superior boys is more than that of the average boys in case of joint families, whereas the percentage in the divided families is less compared to that of the average boys. When this data is analysed statistically, we find that the difference between the groups is not significant, as the obtained value of  $\chi^2$  is 0.44 in 2 x 2 table. Hence we can conclude that the kind of family system does not affect the superior ability of the boys or the

evidence from the data collected in the study indicates that the superior as well as the average boys, tend to come from both types of families.

When the same data is observed in the case of girls, we find that 32.5% of superior girls and 13.4% of average girls come from joint families while 67.5% of superior girls and 86.5% of average girls come from divided families. This shows that the percentage of superior girls is more than that of the average girls in joint families. The whole data is statistically analysed and  $\chi^2$  is calculated. The calculated  $\chi^2$  value is 5.31 which is found to be significant at .05 level of confidence with 1 d.f. Hence we draw our conclusion that the type of the family affect the superiority of the girls and superior girls tend to come in higher percentages from the joint families, compared to the group of average girls. If we look at the data about superior boys and superior girls we note that the superior boys come in higher percentages from the joint families. Whereas the superior girls come in higher percentages from the divided families.

When the data of the superior adults is seen we find that 26.5% of them come from joint families whereas 73.5 of them come from divided families. Hence we can say that the superior pupils in the past came in higher percentages from the divided families. When this data is

compared with the superior boys' group we find the reverse picture. When both these data are statistically analysed it is found that the value of  $\chi^2$  is obtained to be 7.58 which is highly significant with 1 d.f. Hence we can conclude that the superiority of the individual in the past and that of the present is affected by this attribute. Thus the family background has its effect on superiority. The present generation of superior pupils tend to come in higher percentages from joint families where as the past generation of pupils tended to come in higher percentages from divided families.

Table :17: Size of the Families of Subjects

No. of Members in the Family	Boys		Girls		Adults
	Sup.*	Ave.	Sup.	Ave.	Sup.
3	5 (2.5)	4 (4.4)	-	4 (6.6)	2 (5.9)
4	16 (8)	5 (5.5)	1 (2.5)	4 (6.6)	7 (20.6)
5	25 (12.5)	7 (7.7)	11 (27.5)	8 (13.2)	4 (11.8)
6	32 (16)	20 (22.2)	4 (10)	4 (6.6)	7 (20.6)
7	30 (15)	14 (15.4)	8 (20)	8 (13.2)	6 (17.7)
8	24 (12)	6 (6.6)	8 (20)	20 (33)	1 (2.9)
9	10 (5)	5 (5.5)	-	8 (13.2)	2 (5.9)
10	17 (8.5)	11 (12.1)	2 (5)	-	1 (2.9)
11	11 (5.5)	6 (6.6)	-	4 (6.6)	-

(continued)

Table :17: (Continued)

No. of Members in the Family	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
12	8 (4)	2 (2.2)	3 (7.5)	-	-
13	3 (1.5)	2 (2.2)	1 (2.5)	-	-
14	2 (1)	2 (2.2)	1 (2.5)	-	-
15 or above	10 (5)	4 (4.4)	1 (2.5)	-	-
	193*	88	40	60	30

\* 7 Superior Boys are in 0-3 group and 2 average boys are in 0-3 group.

From the above table we see that the superior as well as average boys come in greater percentages from the families having 6 and 7 members namely 31% of superior boys and 37.6% of average boys come from these families. For convenience of analysis if we group four consecutive members in one class interval, we find that 39% of superior boys and 39.6% of average boys come from the group of families having 3 to 6 members and 40.5% of superior boys and 39.6% average boys come from the group of families having 7 to 10 members and 17% of superior boys and 17.6% of average boys come from the families having 11 or more than 11 members, When this data is analysed statistically it is found that the value of  $\chi^2$  is 0.0229 which is not significant. Hence we can conclude

that the size of the family does not affect the superior ability of the individual.

If we look at the case of the girls we find that the percentage of superior girls is more in the family having five members namely 27.5% while the percentage of average girls is more in the family having 8 members namely 33%. The next in turn comes the families having 7 or 8 members and 5 or 9 members respectively. If we divide the data into groups as in the case of boys we find that 40% of superior girls and 33% of average girls come from families having 3 to 6 members 45% of superior girls and 59.4% of average girls come from families having 7 to 10 members and 15% of superior girls and 6.6% of average girls come from families having 11 or more than 11 members. This data when tested for independence with  $\chi^2$  test the value obtained for  $\chi^2$  is 2.9599 which is not significant. Hence we can conclude and confirm our previous conclusion that the size of the family does not affect the superior ability of the individual. When the same type of data is viewed for the case of superior adults, we find that 66.6% of them, come from families having 7 to 10 members. No superior adults is found to come from the families having more than 10 members when this data is compared with that of the superior boys' group, neglecting the third group of members having

11-14 members as the frequency is zero in the case of superior adults. Thus the data is arranged into 2 x 2 table and the  $\chi^2$  is calculated. This calculated value of  $\chi^2$  is 3.13 which is not significant. Hence the superior boys as well as the superior adults come from any size of the family, superior ability in the present or in the past does not depend upon the size of the family. Hence our previous conclusions are confirmed. Finally we can say that the size of the family does not affect the superior ability of the individual.

Table :18: Distribution of Subjects according to Marital Status

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Married	7 (3.5)	8 (8.8)	1 (2.5)	-	31 (91)
Unmarried	193 (96.5)	82 (91.2)	39 (97.5)	60 (100)	1 (2.9)
Divorced or Separated	-	-	-	-	2 (5.9)

The above table reveals that 8.8% of average boys and 3.5% of superior boys are married while 96.5% superior boys and 91.2% average boys are unmarried. This shows that the percentage of superior boys who are married is less than that of the average boys. When this

data is tested for its independence it was found that the value of the  $\chi^2$  is 3.67. This value is not significant with 1 d.f. Hence we conclude that the superior as well as the average boys come from the married status but this status and the superior ability are independent.

If we look at the data about the girls we find that 2.5% of superior girls are married and 97.5% of them are unmarried, and no average girl is found to be married. There is an evidence of higher percentage in the case of superior girls having married life but the difference in percentages cannot be tested for independence as the frequency in the case of average girls is zero. A t - test is applied for considering the significance of the Marital status, and the calculated value is obtained to be 0.625, which is not significant. Hence we can say that the marital status of girls and superior ability are independent.

If we look at the group of superior adults we can say that 91% of them are married and 2.9 of them are unmarried and 5.9% of them are either separate or divorced. This status of theirs cannot be compared with that of the present group of superior pupils because the marital status at the time of study is to be considered for our purpose.

From the above data we can note that most of the pupils either superior or average do not marry during the period of study and who so ever that marries during this period is not affected in his or her superior ability.

We also find that the percentage of superior boys to the average boys is less in the case of married life but this tendency is reversed in the case of girls.

Table :19: Distribution of Pupils showing the Position of Borrowing Money

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Yes	30 (15)	11 (12.1)	4 (10)	-	6 (17.7)
No	170 (85)	79 (87.9)	36 (90)	60 (100)	28 (82.3)

The above table shows that 15% of superior boys and 12.1% of average boys borrow money for their studies while 85% and 87.9% respectively are not borrowing the same. When this data is analysed statistically and tested for its independence by a Chi-square test it is found that the value calculated for  $\chi^2$  is 0.39 which is not significant. Though there is a high percentage of superior boys borrowing money it is indicated that the superior as well as the average boys borrow money for their studies

but the superior ability of boys is not affected by the attribute of borrowing money.

When the same data is viewed in the case of girls it is found that 10% of superior girls borrow money and 90% of them do not borrow the money. In the case of average girls no student is found to borrow money. When t - test is applied for significance it is found to be 1.2 which is not significant. Hence we can confirm our previous conclusion and can say that the superior as well as average girls borrow money but this attribute does not affect the superior ability.

If we look at the data about the superior adults we find that 17.7% of them have borrowed money during their studies while 82.3% of them have not borrowed the same when this data is compared with that of the average boys we find that the percentages of the adults is more than that of the superior boys borrowing money. When the same has been analysed for  $\chi^2$  test, it is found that the value of  $\chi^2$  is 0.16 which is not significant at all. Hence we can conclude that superior boys as well as superior adults borrowed money but the borrowing money in the past or the present has not affected the superior ability of the individual.

Moreover we can note that most of the pupils, superior or average study without borrowing money. The borrowers

are much less in percentage compared to that of the pupils which are not borrowing.

If we observe the percentages in the case of pupils borrowing money we find that the percentage of superior pupils borrowing money is much more than the corresponding percentage of average pupils.

Table :20: Freestudentships earned by Subjects

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Full Free	18 (9)	1 (1.1)	4 (10)	12 (20)	20 (58.8)
Three-Fourth	13 (6.5)	3 (13.3)	-	-	7 (20.6)
One-Half	19 (9.5)	7 (7.7)	-	-	-
One-Fourth	11 (5.5)	8 (8.8)	-	-	-
Nil	139 (69.5)	71 (78.1)	36 (90)	48 (80)	7 (20.6)

If we examine the above table we find that very few students get freestudentships. If we examine the data for different groups we find that 69.5% superior boys and 78.1% of average boys do not earn freestudentship and 30.5% of superior boys and 21.9% of average boys earn freestudentships. This shows that the percentage of superior boys is more than that of the average boys, earning

freestudentships. When this evidence is further analysed and tested for significance, we found that  $\chi^2$  is 2.739. This value of  $\chi^2$  is not significant. Hence we can conclude that superiority and earning the freestudentships are independent.

When the data is observed in the case of girls, we find that 10% of superior girls and 20% of average girls earn full freestudentship. The percentage of average girls earning full freestudentship is more than that of the superior girls. When this difference is tested for its independence by a  $\chi^2$  test,  $\chi^2$  is found to be 1.765 which is not significant. Hence we can conclude that superiority and earning freestudentship are independent.

In the case of superior adults, we find that 58.8% of them earned full freestudentship and 20.6% of them earned 3/4ths of tuition fees as freestudentships, and 20.6% of them did not earn any freestudentship. Hence we could see that 79.4% of the superior adults earned freestudentships. When this data is compared with that of the superior boys group, we find that only 30.5% of them get freestudentship. This data is further analysed statistically and  $\chi^2$  is calculated. The value of Chi-square is found to be 29.62. This value is found to be highly significant. This leads us to conclude that superior adults earned their freestudentship in higher percentages than that of the superior boys.

Table :21: Distribution of Pupils according to the Number of Brothers

No. of Brothers	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Nil	21 (10.5)	14 (15.5)	5 (12.5)	16 (26.6)
1	50 (25)	20 (22.2)	17 (42.5)	16 (26.6)
2	57 (28.5)	18 (20)	8 (20)	4 (6.6)
3	28 (14)	18 (20)	6 (15)	20 (33.6)
4	24 (12)	11 (12.2)	3 (7.5)	-
5	17 (8.5)	9 (10)	-	4 (6.6)
6	-	-	1 (2.5)	-
7	2 (1)	-	-	-
8	1 (0.5)	-	-	-

The above table reveals that the percentage of superior boys is more than that of the average boys having one or two brothers, but the picture reverses when the percentage is observed in the other categories of brothers i.e. having 3 or more brothers. For the convenience of statistical analysis the data is arranged into two 'wo

groups. The first group is formed by combining the frequencies of boys having either no brother or brothers upto the number 4 and the second group is formed by combining the frequencies of boys having 5 or more than 5 brothers. The number of superior boys in the first group is 180 and the number of average boys in the same group is 81. Whereas the respective frequencies in the second group are 20 and 9. This data shows that 90% of superior boys and 89.9% of average boys come from the first group and 10% of the superior boys and 10% of average boys come from the second group. These percentages indicate that superior boys come in slightly higher percentage from the families having brothers not more than four. When this data is analysed statistically and  $\chi^2$  is obtained. The obtained value of  $\chi^2$  is 0.0017 which is not significant. Hence we can conclude that the superior boys come in larger percentages from the families where the number of brothers is less than five compared to the average boys but does not attribute to the superiority.

In the case of girls we find that the percentage of superior girls is more in the group of brothers having the number one or two, but the picture reverses with the

other group of brothers having number more than two. But for our convenience we divided the data as discussed above, into two groups. We find 36 superior girls in the first group and 4 superior girls in the second group, whereas the frequencies of average girls are 5, 6 and 4 respectively. When  $\chi^2$  is calculated in 2 x 2 table, we find that the value is 0.3622 which is not significant. Hence it can be concluded that number of the brothers in the family does not attribute to the superiority of the girls and superior and average girls tend to come from the families where number of brothers vary from 1 to 6. From the data we can conclude that superior pupils come in larger percentages from the families where the number of brothers is less than four.

On observing the Table No.22, we find in the case of boys that 14% superior boys and 16.4% of average boys have no sisters. The percentage of superior boys is slightly less (2.4%) than that of the average boys. When the second category is observed it was noted that 25% of superior boys and 24.4% average boys belong to

Table :22: Distribution of Pupils according to Sisters

No.	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Nil	28 (14)	15 (16.4)	4 (10)	12 (20)
1	50 (25)	22 (24.4)	9 (22.5)	8 (13.2)
2	56 (28)	23 (25.5)	15 (37.5)	8 (13.2)
3	34 (17)	15 (16.4)	5 (12.5)	12 (20)
4	24 (12)	9 (10)	5 (12.5)	4 (6.6)
5	5 (2.5)	3 (3.3)	-	12 (20)
6	3 (1.5)	2 (2.2)	2 (5)	-
7	-	1 (1.1)	-	-
8	-	-	-	4 (6.6)

the families having one sister. The percentage of superior boys is slightly higher (0.6) than that of the average boys. A similar data about the number two is observed. We find that 28% of superior boys and 25.5% of average boys belong to this group. The percentage of superior boys is more than that of the average boys (i.e. 2.5%). The next category of families having three

sisters is observed, we find that 17% of superior boys and 16.4% of average boys belong to this group. The similar percentage of increase is found in the case of superior boys. There is an increase of 2% in the case of superior boys, having four sisters.

The examination of the above table shows that 96% of superior boys and 92.7% of average boys come from the families having less than five sisters. This difference in the percentages is not very high but when this difference is tested for its significance, we could get the  $\chi^2$  value 0.9607 which is not significant. Hence we can conclude that the superior as well as average boys tend to come from the families having less than five sisters. When the same data is observed in the case of girls we find that 95% of superior girls and 73.4 of average girls come from the families having less than five sisters and 5% of superior girls and 26.6% of average girls, come from the families having five or more than five sisters. When this difference is tested for independence  $\chi^2$  is found to be 7.632 which is highly significant. Hence we can conclude that the superior girls tend to come from families having less than five sisters.

In the above two cases we find two different conclusions. In the case of boys the number of sisters do

not affect the superior ability of a boy but in the case of girls the number of sisters do affect the superior ability of a girl. Hence we can conclude that superior girls tend to come in higher percentage from the families having less than five sisters.

We find in the case of boys that the percentage of superior boys to average boys goes on increasing with the increase in the number of sisters. This tendency is marked upto the number four but then the tendency is reversed.

In the case of girls the similar tendency is seen. Upto the number 2 there is an increase in the percentage of superior girls to that of the average girls and then onwards the tendency is reversed.

Table : 23A : Order of the superior-Average Boys  
in the Family.

Order: Kind	No. of children in the Family									Total
	1	2	3	4	5	6	7	8	9	
I Superior	1	6	13	14	12	16	6	-	-	68
Average	4	1	3	10	1	4	1	1	1	26
II Superior	-	7	15	7	6	3	1	2	-	41
Average	-	4	2	3	6	3	2	1	1	22
III Superior	-	-	12	9	12	8	2	2	-	45
Average	1	1	7	8	6	1	3	1	-	28
IV Superior	-	-	-	3	8	6	4	-	-	21
Average	-	-	-	1	6	-	1	1	-	9
V Superior	-	-	-	-	13	3	-	-	-	16
Average	-	-	-	-	-	1	1	-	-	2
VI Superior	-	-	-	-	-	3	3	-	-	6
Average	-	-	-	-	-	2	-	-	-	2
VII Superior	-	-	-	-	-	-	-	1	-	1
Average	-	-	-	-	-	-	-	1	-	1
VIII Superior	-	-	-	-	-	-	-	-	-	-
Average	-	-	-	-	-	-	-	-	-	-
IX Superior	-	-	-	-	-	-	-	-	2	2
Average	-	-	-	-	-	-	-	-	-	-
TOTAL; Superior	1	13	40	33	51	39	16	5	2	200
Average	5	6	12	22	19	11	8	5	2	90

Average No. of Children : Superior : 4.54  
In the Family : Average : 4.62

Average Order of the: Superior : 2.6  
Child in the Family : Average : 2.43

This table reveals that in the family of superior boys the parents have on an average 4.57 children and 34% of superior boys are first born and 20.5% of them are second born. 22.5% of them are third born. 10.5% of them are fourth born and 12.5% of them are born in the order beyond 4th. This shows that the superior boys are in higher percentages (77) within the first three orders. The average order of the superior boys in the family is 2.6.

It is seen that in the family of average boys the parents have on an average 4.62 children. 28.8 % of average boys are first born, 24.4% are second born, 31.1% of them are third born and 10% are fourth born. Only 5.5% are born beyond the fourth order. This shows that 84.3% of them are born within the first three orders. The average order of the average boy in the family is 2.43.

If both the groups of boys are compared on the basis of this data it can be inferred that they do not differ significantly. The t-score for the average number of children is found to be 0.4 which is not significant. Hence the conclusion that can be drawn from this is as follows : Both the groups of boys have their families with nearly equal average of children, and identical order. In short the order of the child and the number of siblings are not affecting the superiority of the child. It is seen that as the number of children in the family increases the order of the child appears to decrease as the correlation is negative.

Table : 23B : Order of Superior-Average Girls in the Family.

Order:	Kind	No. of children in the Family									Total
		1	2	3	4	5	6	7	8	9	
I	Superior	-	3	5	3	-	-	1	-	1	13
	Average	-	4	4	-	4	-	-	-	4	16
II	Superior	-	1	2	2	-	5	-	-	1	11
	Average	-	-	-	4	4	-	4	-	-	12
III	Superior	-	-	1	3	2	1	-	-	-	7
	Average	-	-	-	-	4	8	-	-	-	12
IV	Superior	-	-	-	1	2	3	1	-	-	7
	Average	-	-	-	-	-	12	-	4	4	20
V	Superior	-	-	-	-	-	2	-	-	-	2
	Average	-	-	-	-	-	-	-	-	-	-
TOTAL: Superior		-	4	8	9	4	11	2	-	2	40
Average		-	4	4	4	12	20	4	4	8	60

Average No. of Children in the Family: Superior : 4.65  
Average : 5.8

Average order of the child in the Family : Superior : 2.35  
: Average : 2.6

On examining this table we find that the average number of children in the family of superior girls is 4.65 and 32.5% of superior girls are first born and 27.5% of them are second born. So it is noted that more than half of the superior girls are either first or second born. The average order of the girl in the family is 2.35, More over we can mark a tendency that as the number of children in the families

of superior girls increases, the order of that superior girl in the family appears to decrease, as the correlation is negative. It is seen that in the family of average girls the average number of children is 5.8 and 26.6% of the average girls are first born, 20% of them are second born. This shows that less than half of the average girls come from the first two groups and more of them come from the orders beyond second. The average order of the average girl in the family is 2.6.

If we compare both the groups of girls, we find that the average number of children in the family of superior girls is less than that of the average girl, and the average order of the superior girl is lower than that of the average girls. The order of the superior girl or the size of the family do not affect the superiority of the girls.

Table :24: Information regarding Pursuing a Profession.

Kind.	Superior:Average:		Superior:Average:	
	Boys	Boys	Girls	Girls
Yes	32 (16)	7 (8)	13 (32.5)	-
No	168 (84)	81 (92)	27 (67.5)	60 (100)

From the examination of the above table it seems that 16% of the superior boys and 8.0% of the average boys pursue the profession of a near relative while 84% of the superior boys and 92% of the average boys do not pursue the

profession of a near relative. The percentage of superior boys pursuing the profession of a near relative is more than that of the average boys. When the above data is examined statistically for independence of pursuing of a profession, the  $\chi^2$  is found to be 3.378 which is not significant. Hence we conclude that superior boys pursue the professions of near relatives as much as the average boys do.

In the case of girls, it is found that 32.5% of the superior girls pursue the profession of a near relative where as 67.5% of superior girls and 100% of average girls do not pursue the profession of a relative. As the frequency in the case of average girls pursuing the profession of a relative is zero, the calculation of  $\chi^2$  is not possible. Hence we cannot statistically confirm the former conclusion, but still there is an evidence that the greater percentage of superior girls pursue the profession of a near relative compared to that of the average girls.

We find that the percentage of superior pupils pursuing the profession of a near relative is much more to that of the average pupils.

Table :25: Residence of Pupils at the Places of Study

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
In Hostel	121 (60.5)	36 (46)	10 (25)	28 (46.6)
With Parents	60 (30)	53 (58.9)	29 (72.5)	32 (53.4)
With Relatives	1 (0.5)	1 (1.1)	1 (2.5)	-
Not Responded	18 (9)	-	-	-

On observing the above table we find that the residential arrangements of the pupils at the places of their study are categorised under the headings (i) In Hostel (ii) With Parents (iii) With Relatives.

When the data is looked at, it is seen that 60.5% of superior boys and 40% of average boys stay in hostels for their study. This shows that the percentage of superior boys is much more than that of the average boys. If the second category is observed, we find that 30% of superior boys and 58.9% of average boys stay with their parents. Here the percentage of superior boys is much less than the corresponding percentage of the average boys. The third category has negligibly small frequencies for any valid comparison.

If we categorise the above data into two categories namely (i) with parents and (ii) away from parents we find that out of 182 superior boys only 60 boys stay with parents where as 122 superior boys stay away from parents. This shows that the number of superior boys staying away from parents is much more than the corresponding number of superior boys staying with parents.

In the case of average boys it is found that out of 90 boys 53 of them stay with parents and 37 of them are staying away from the parents. This shows that the number of average boys staying with parents is much more than the number of boys staying away from them.

When the above data is tested for its significance we obtained the value of  $\chi^2$  to be 16.66 which is highly significant. Hence we can conclude that residence of pupils at the place of study has a bearing on the superiority of the individual child.

In the case of girls, if the data is observed, we find that 25% of superior girls and 46.6% average girls stay in Hostels. This shows that the proportion of superior girls is much less than the corresponding percentage of average boys. When the second category is observed, we find that 72.5% of superior girls and 53.4% of average girls stay with parents at the places of their study. The percentage of superior girls is much more than that of the average girls.

The third category is negligibly small for comparison.

When the above data is categorised in the two categories as seen in the case of boys, we find that out of 40 superior girls 29 stay with parents and 11 stay away from parents and in the case of average girls we find that out of 60 girls 32 stay with parents and 28 stay away from parents. Both the above percentages show that most of the girls either superior or average stay with parents. When the above data is tested for its significance, the  $X^2$  value obtained is 0.0080. This is <sup>not</sup> significant. Hence we conclude that the residential arrangement and the superior ability of the girls are independent.

Both these conclusions are in tune with each other and hence we can say that superior boys mostly stay away from parents but the superior girls stay with the parents at the places of their studies.

Table :26: Economic Help from the Parents

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Yes	113 (56.5)	47 (52.2)	37 (92.5)	56 (93.3)
No	87 (43.5)	41 (45.5)	3 (7.5)	4 (6.7)

In the Home-Information Blank the Question No.12 was asked as follows :

' Can your parents afford to help you financially to complete your selected course of study ? '

The responses to the above question are tabulated as shown in the above table.

On the examination of the above table it can be seen that 56.5% of superior boys and 52.2% of average boys have parents who can afford to help them financially to complete the course of study where as 43.5% of superior boys and 45.5% of average boys have parents who cannot do so. From the above table we can say that in both the cases the percentages of parents responding 'Yes' are more than that of the parents responding 'No.' The responses in the two groups of boys are not much different. When this data was tested for its significance by a  $\chi^2$  test, it was found that the  $\chi^2$  value is only 0.2364 which is not significant. Hence we can conclude that the economic help received from the parents and superiority of the boy are independent of each other. Still there is an evidence of higher percentage in the case of superior boys.

When the data is examined in the case of girls, it can be noted that 92.5% of superior girls and 93.3% of average girls have parents who can afford to help their wards financially to complete their <sup>studies</sup> only 7.5% of superior girls and 6.7% average girls have parents who cannot afford to help their wards that way. The percentages in the first

category of responses is much higher than that of the second category. The difference between the percentages of responses in the two groups is also very small and hence can be said to be insignificant. This data leads us to conclude that the economic conditions of the parents of either superior or average girls is quite satisfactory. The girls who come for education belongs to the families having good economic conditions.

Table :27: Status of the Family in the Community

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Very High	60 (30)	29 (32.2)	18 (45)	32 (53.3)
High	108 (54)	37 (41.1)	19 (47.1)	28 (46.6)
Normal	32 (16)	24 (26.6)	2 (5)	-
Below Normal	Nil	Nil	Nil	Nil

Looking to the columns of superior and average boys it can be seen that 30% of superior boys and 32.2% of average boys belong to the families, having a very high status in the community.

Looking to the second category, it can be seen that 54% of superior boys and 41% of average boys belong to the families having a high status in the community.

On the examination of the third category, it can be seen that 16% of superior boys and 26.6% of average boys belong to the families having a normal status.

When the above data is tested by a  $\chi^2$  test, the value of  $\chi^2$  is obtained to be 5.8699 with 2 d.f. This is not significant. This shows that though the superior boys tend to come in higher percentages from the families having above normal status in the community, this status has no bearing on the superiority.

The same data when observed in the case of girls it can be seen that 45% of superior girls and 53.3% of average girls come from families having very high status whereas 47.1% of superior girls and 46.6% of average girls come from the families having high status, and only 5% of superior girls come from the normal families. The whole picture reveals that the girls generally come from the families having very high or high status in the community. Very few girl students come from the normal families when the difference between the two groups has been tested by a  $\chi^2$  test, the frequencies in the normal group were not taken into consideration as they were very small. The  $\chi^2$  is calculated by arranging the data in 2 x 2 table. The  $\chi^2$  obtained is 0.1874 which is not significant. Hence we can conclude that the status in the community has no bearing on the superiority of the individual child.

To support the above conclusion, it is noteworthy to report the investigations done in this connection.

\* More gifted children come from the homes where the social and economic level is above average. Nevertheless, no racial or social group has a monopoly on giftedness. There is no conclusive evidence to support or refute the genetic superiority of any of the groups. (Terman et al 1925)

Table 28: Occurrence of Intercaste Marriage

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Yes	6 (3)	1 (1.1)	2 (2)	-
No	194 (97)	89 (98.9)	38 (95)	60 (100)

=====  
 Generally it is believed that intercaste marriage in the family hinders the progress of a child in the family. Under this belief a data was collected. The data was arranged as shown above.

This data shows that only 3% of superior boys and 1.1% of average boys come from families in which there is an occurrence of intercaste marriage while 97% superior boys and 98.9% of average boys come from families having no such marriages.

In case of girls it is found that only 5% of superior girls come from the families where occurred the intercaste

marriages where as 95% of superior girls and 100% of average girls belong to the families where intercaste marriages did not occur.

From the above data it can be said that the percentage of superior pupils, coming from the families where the occurrence of intercaste marriages is more than the corresponding percentage of average boys. Moreover, the percentage of occurrence of such marriages is much less than that of the non-occurrence in both the groups of pupils.

A test of independence was not applied to this data as the frequencies of occurrence are very small.

Table 29: Selection of Diversified Courses

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Yes	11 (5.5)	7 (7.7)	4 (10)	8 (13.3)
No	189 (94.5)	83 (92.3)	36 (90)	52 (86.7)

=====

On the examination of the above table it is seen that 5.5% of superior boys and 7.7% of average boys have selected the diversified courses. The percentage of superior boys is slightly less than the corresponding percentage of average boys. The percentages of superior and average boys, not offering the diversified courses are 94.5% and 92.3% respectively. Hence we can conclude

that the percentage of the boys offering diversified courses is much less than that of the boys not offering them. When this small difference in the percentages of the two groups is analysed statistically and tested for its significance, it was found that the value of  $\chi^2$  is 0.55. Therefore, the difference is not significant. Hence we can conclude the superior as well as average boys offer the diversified courses, but the type of the course does not affect the superior ability of the boys.

In the case of girls, we find that 10% of superior girls and 13.3% of average girls have offered a diversified course of study. This shows that the percentage of superior girls is less than that of the average girls. 90% of superior and 86.7% of average girls have not offered diversified courses. This shows that the percentage of girls either superior or average, not offering the diversified courses, is more than that of the girls offering diversified courses.

A  $\chi^2$  test is not applied in this case because of the small frequencies in the superior group.

From the above data it can be concluded that the percentage of pupils offering diversified courses is quite small. The type of the course has no bearing on the superiority of the girl.

The diversified courses are further categorized and the pupils offering them are shown in the table below:

Table :29: (a)

Kind	Boys			Girls	
	Sup.	Ave.		Sup.	Ave.
Commerce	4	5	Home Science	4	8
Technical	7	2			
	<u>11</u>	<u>7</u>			

This table reveals that out of 11 superior boys, offering diversified courses, 7 of them have offered the course of Technical Education and 4 of them offered the course of Commerce. While out of 7 average boys 5 offered Commerce 2 offered Technical Education.

All the girls either superior or average offered Home Science as the diversified course.

Table :30: Failures of Subjects in Careers

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Yes	6 (3)	6 (7.5)	-	12 (20)	4 (11.7)
No	194 (97)	74 (92.5)	40 (100)	48 (80)	30 (88.3)

The above data shows that 3% of superior boys and 7.5% of average boys failed during their academic careers. The percentage of failures in the case of superior boys is

less than that of the average boys. This leads us to conclude that the superior boys do not fail so much as the average boys. The percentages of the superior boys and the average boys who have never failed are 97% and 92.5% respectively. The calculated  $\chi^2=2.821$  (not significant)

When the data about the girls is seen we find that no superior girl failed during academic careers, whereas 20% of average girls failed during academic careers. The difference between these two percentages is 20. This difference is very high. Hence we can conclude that the superior girls do not fail so much as the average girl.

A  $\chi^2$  test cannot be applied to these data as the frequency in the case of superior girls who have ever failed is zero.

The above data in short, shows us that the superior pupils fail less often than the average pupils in their academic careers.

In the case of superior adults we find that 11.7% of them failed during their academic careers while 88.3% of them never failed.

Percentage of failures among superior pupils of present as well as <sup>of</sup>past is less compared to average pupils.

Table 31: Subjects According to Sickness Suffered

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Yes	34 (17)	21 (23.3)	10 (25)	-	4 (11.7)
No	166 (83)	69 (76.7)	30 (75)	60 (100)	30 (88.3)

The above table reveals that 17% of superior boys and 23.3% of average boys suffered some type of sickness during their life time. While 83% of superior boys and 76.7% of average boys did not suffer any sickness. This shows that the percentage of superior as well as average boys who have suffered any kind of sickness is much less than those who have not suffered and the percentage of superior boys who have suffered any kind of sickness is less than that of the average boys. When this difference of 6.3% between the two groups is tested for its

significance, the  $\chi^2$  is found to be 1.62 . This value is not significant. Hence we can say that the superior as well as the average boys suffer sickness, but the sickness does not hinder the progress of the said pupils.

In the case of girls, we find that 25% of superior girls suffered some sickness while 75% of them did not suffer at all. Hence we can say that most of the superior girls are quite healthy. When the percentages of superior as well as average girls who have not suffered any sickness, are seen we find that 75% of superior girls and 100% of average girls did not suffer at all. The difference between these two percentages is very high. But this cannot be tested by a  $\chi^2$  test because the frequency in the case of average girls is zero.

In the case of superior adults  $\bar{x}$  we find that 11.7% of them suffered some sickness, during their career while 88.3% of them did not suffer any sickness.

Table :32: Subjects Preferred by Pupils

Subjects	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Mathematics	176 (88)	20 (22.2)	16 (40)	8 (13.3)
Science	15 (7.5)	38 (42.2)	11 (27.5)	4 (6.6)
Language	2 (1)	-	-	-
Hindi	-	4 (4.4)	1 (2.5)	4 (6.6)
Sanskrit	2 (1.0)	3 (3.3)	1 (2.5)	4 (6.6)
English	-	7 (7.7)	4 (10)	8 (13.3)
Gujarati	-	6 (6.6)	2 (5)	20 (33.3)
Commerce	1 (0.5)	4 (4.4)	-	-
Social Studies	1 (0.5)	5 (5.5)	-	-
Drawing	-	2 (2.2)	-	4 (6.6)
Nothing Particular	3 (1.5)	1 (1.1)	5 (12.5)	8 (13.3)

The above table reveals that 88% of superior boys and 22.2% of average boys preferred Mathematics. This shows that the percentage of superior boys is much more than that of the average boys. When this difference between the two

percentages was tested for its significance by a t-test, the value obtained is 11.37. This is highly significant i.e. at 5% and 1% level. Hence we can say that the percentage of superior boys, preferring Mathematics is much larger than that of the average boys.

When the second subject of preference is seen, we find that 7.5% of superior boys and 42.2% of average boys preferred science. This shows that the percentage of superior boys is much less compared to average boys in selecting this subject. There is a difference of 34.7% between the two groups. When this difference was tested by t-test, the result obtained is 7.07. This is significant at 0.5 or 0.1 levels. This result shows that the percentage of superior boys is much less than that of the average boys, preferring this subject.

If we combine all the languages and note the results we find that 2% of superior boys and 22% of average boys preferred languages.

The difference between these two percentages is 20. Moreover the distribution of average pupils is more vivid than that of superior boys. Hence we can conclude that the superior boys prefer language in less percentages than the average boys.

The percentages of the Commerce course for the two groups are 0.5 and 4.4.

This is also an evidence that shows that average boys prefer the subject larger percentage as compared to superior boys.

The same trend can be noted in the case of Social Studies.

The subject of Drawing is not preferred by superior boys but 2.2% of average boys preferred this subject.

From the above discussion we can say that 95.5% of superior boys and 64.4% average boys preferred the subjects like Mathematics and Science and 4.5% of superior boys and 35.6% of average boys preferred other subjects. This shows that the choices of superior boys are limited and fixed while those of average boys are unlimited and vivid.

We find that the percentage of superior boys to average boys is larger than that of the average boys offering Mathematics and Science subjects. In the case of languages and other subjects the picture is reversed.

In the case of girls we find that 40% of superior girls and 13.3% of average girls prefer Mathematics. This shows that the percentage of superior girls is larger than that of the average girls. When this difference was tested by t-test, the value obtained was 1.02, which

is not significant. Hence we can conclude that the superior as well as the average girls preferred Mathematics with nearly equal percentages.

The second preference gives the percentages as 27.5 and 6.6 respectively. These percentages show that the superior pupils prefer this subject of Science more than the average girls.

If we look at the preference on languages we find that 20% of superior girls and 59.8% of average girls prefer languages. This shows that the percentage of average girls is more than that of the superior girls. Moreover in the both the groups the preferences are well distributed.

In the subject of drawing we find only 6.6% of average girls while no girl from the superior group preferred this subject. We find the similar result as in the case of boys that the percentage of superior girls to that of the average girls is more in the case of subjects like Mathematics and Science. While in the languages and other subject the picture is reversed.

Table :33: Subjects Disliked by Pupils

Subjects	Boys		t Score	Girls		t Score
	Sup.	Ave.		Sup.	Ave.	
Mathematics	1 (0.5)	18 (20)	6.17	2 (5)	8 (13.3)	0.43
Science	1 (0.5)	-	-	-	8 (13.3)	-
Sanskrit	10 (5)	20 (22.2)	4.411	4 (10)	4 (6.6)	0.19
Hindi	-	-		-	-	
Gujarati	-	-		-	-	
English	-	2 (2.2)		-	4 (6.6)	
Commerce	-	2 (2.2)		-	-	
Social Studies	1477 (73.5)	20 (22.2)	8.21	14 (35)	12 (20)	0.54
Drawing	7 (3.5)	6 (6.6)	1.18	1 (2.5)		
Music	-	-		1 (2.5)	24 (40)	1.32
Language	4	-		-	-	
Nothing Particular	30 (15)	22 (24.4)		18 (45)	-	

On the examination of the above table it is seen that 73.5% of superior boys and 22.2% of average boys do not like the subject of social studies. This data reveals a great difference between the two percentages. The percentage of superior boys is much larger than that of the average boys. Hence we can conclude that the superior pupils dislike social studies in a larger percentage compared to average pupils, and when this data is analysed statistically we find the t-score to be 8.21. This t-score is much higher and hence significant. Hence our conclusion is confirmed.

We also see that 15% of superior boys and 24.4% of average boys do not show any dislike about any subject. Hence in the case of superior boys, therefore, only 9.5 % dislike the subjects other than social studies and in the case of average boys the subjects disliked over and above social studies are Sanskrit and mathematics. The percentages of the average boys in these subjects are 22% and 20% respectively. If we sum up all the percentages in this subjects we find that 42.0% of them dislike the above subjects. When the data is compared with the superior boys we find statistically that the t-score obtained are 4.41 and 6.17. Both these are much higher and significant. Hence we can conclude that average boys dislike both these subjects in greater percentages compared to superior boys.

This data reveals that both the groups dislike six subjects. These six subjects in the case of superior boys

according to the percentages are social studies, sanskrit, mathematics and science, drawing, language, and in the case of average boys according to the percentages are social studies sanskrit, mathematics, drawing, english and commerce. The gradation of these subjects in terms of percentages show that the two groups differ in their gradation of dislike.

In the case of girls we find that 35% of superior girls dislike social studies, 10% of them dislike sanskrit, 5% of them dislike mathematics and 45% do not give any positive dislike. Hence the gradation of subjects of dislike for superior girls can be arranged as follows : Social, studied sanskrit, mathematics, drawing and music.

In the case of average girls 39.6% of them dislike music, 19.8% of them dislike social studies, 13.3% of them dislike mathematics and 13.3% of them dislike science, 4.4.%of them dislike sanskrit and 4.4% of them dislike english.

The above data reveals that both these groups do not like five subjects. The gradation of their dislike, is as follows : (i) Social Studies, (ii) Sanskrit, (iii) Mathematics, (iv) Drawing, (v) Music. In the case of average girls the gradation is as follows : (i) Music, (ii) Social studies, (iii) Mathematics, (iv) Science, (v) Sanskrit, (vi) English. Both these groups differ largely in their dislikes.

On the whole the superior pupils dislike social studies while the average pupils dislike mathematics and science.

Table :34: Year of Passing S.S.C. Examination

Year	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
1958	47 (24.4)	21 (23.3)	10 (25)	8 (13.3)
1959	38 (19.7)	21 (23.3)	8 (20)	4 (6.6)
1960	38 (19.7)	20 (22.2)	7 (17.5)	4 (6.6)
1961	30 (15.6)	13 (14.4)	11 (27.5)	12 (20)
1962	39 (20.3)	10 (11.1)	4 (10)	20 (33.3)
1963	-	5 (5.5)	-	12 (20)

\* 8 superior boys have not responded.

The work of collecting data about this problem was started in the year 1962. It was decided to collect the data from the students who passed S.S.C. during the years 1958-1962. So the data about the superior group was collected from the students of these years and the data of the average group was collected thereafter. So one more year was included for convenience.

The above table shows the yearwise distribution of pupils of different groups.

From the above data mean age of passing S.S.C. Examination was calculated for each group. They are as follows :

(i) Average Age of a Superior boys passing S.S.C. Examination is :	Y. - Mths. 14 - 2
(ii) Average Age of an Average boy passing S.S.C. Examination is :	17 - 0
(iii) Average Age of a Superior girl passing S.S.C.Examination is :	16 - 2
(iv) Average Age of an Average girl passing S.S.C.Examination is :	17 - 1

This data shows that the superior boys passed their S.S.C. examination at the age of nearly 14 years whereas the average boys passed the same at the age of 17-0 years. This reveals that the superior boys passed the S.S.C. Examination at much younger age than average boys.

In the case of girls, we find that the superior girls passed their S.S.C. examination at the age of nearly 16 years. Whereas the average girls passed their S.S.C. examination at the age of 17 years. This shows that superior girls passed their S.S.C. examination one year earlier than that of the average girls.

Hence from the above results we can say that superior pupils passed their S.S.C. Examination earlier than the average pupils.

It can be seen that the average age of superior boys who passed the S.S.C. examination is much less than the age of superior girls.

Table :35: External Examinations Passed by Pupils

Kind	Boys		t Score	Girls		t Score
	Sup.	Ave.		Sup.	Ave.	
Drawing	61 (30.5)	22 (24.4)	1.06	15 (37.5)	8 (13.3)	0.8913
Hindi	162 (81)	70 (77.7)	0.65	13 (32.5)	52 (86.6)	1.757
Sanskrit	66 (33)	15 (16.7)	2.86	13 (32.5)	20 (33.3)	0.02636
Science	10 (5)	5 (5.5)	0.1776	3 (7.5)	-	-
Gujarati	35 (17.5)	15 (16.7)	0.2088	1 (2.5)	8 (13.3)	0.5853
Music	-	-	-	3 (7.5)	-	-
Dance	-	-	-	1 (2.5)	-	-
English	6 (3)	2 (2.2)	2.458	-	-	-

From the above table we can see that 30.5% of superior boys and 24.4% of average boys appeared and passed the drawing examinations conducted by the Government Board. This shows that the percentage of superior boys is larger than that of the average boys. The difference between these two percentages is 6.1 which is not very high and when this difference is tested for its significance by a t-test, it was found that the value is only 0.06, which is not significant. Hence we can conclude that the superior

as well as the average boys appeared and passed this examination and it is not a special characteristic of superior boys.

The next examination which is shown in this table is about the national language Hindi. These examinations are conducted by recognised educational boards. We find that 81% of superior boys and 77.7% of average boys appeared and passed this examination. These percentages show that the percentage of superior boys is larger than the corresponding percentage of average boys. The difference between these two percentages is 3.3, which is tested for its significance by a t-test. The value obtained is 0.65. This is not significant. Hence we conclude that superior as well as average boys appear at this examination but it does not show a special characteristic of superior boys. In fact we find that either superior or average boys appear in a large percentage for this examination. We find that the percentage of superior boys to the average boys is large.

A third category of examination is looked at we find that 33% of superior boys and 16.7% of average boys appeared and passed the examination on the subject of Sanskrit. This examination is conducted by private authorities. The above percentages show that the percentage of superior boys is larger than the corresponding

percentage of average boys. The difference between these two percentages is 16.3. This difference looks very high and it is significant. Hence we can conclude that the superior boys are more interested in appearing at this examination compared to that of the average boys. We find that the percentage of superior boys is much more than the average boys.

The examination in science shows that 5% of superior boys and 5.5% of average boys appeared and passed this examination. The percentage of superior boys is less than that of the average boys. But the difference between the two percentages is only 0.5%. This difference is negligibly small. Hence we can conclude that superior as well as average boys appear for this examination, and this does not show any marked tendency. Out of 15 boys who appeared for this examination 10 boys were superior. Hence the percentage of superior boys to average boys is large.

The next examination of Gujarati shows that 17.5% of superior boys and 16.7% of average boys appeared and passed this examination. The percentage of superior boys is slightly more than that of average boys. This difference cannot be said significant. Hence the passing of this examination is not a marked tendency of any groups.

All the other examinations have no remarkable percentages which require any discussion.

In the case of girls the same data is observed.

In the examination on drawing we find that 37.5% superior girls and 13.3% average girls appeared and passed this examination. The percentage of superior girls is more than that of the average girls. The difference between these two percentages is 24.2, which is very high and when this was tested for significance, calculated value of  $t$  was 0.89. Hence we can conclude that superior as well as average girls appeared for this examination, but the passing of this examination does not attribute to the superior ability of the girls.

When we look the examination of Hindi we find that 32.5% of superior girls and 86.6% of average girls appeared and passed this examination. The percentage of superior girls is much less than that of the average girls. The difference between the two percentages is 54.1. This difference is very high but <sup>not</sup> significant. Hence we can conclude that the percentage of superior girls is much less than that of the average girls.

A third examination of Sanskrit is observed. We find that 32.5% of superior girls and 33.3% of average girls appeared and passed this examination. The percentage of superior girls is less than that of the average girls. The difference between the two percentages

is  $0.026$ , which is not significant. Hence we conclude that that there is not a marked tendency between the two groups.

Examination on Science is passed only by superior girls. This shows that superior girls are very keen to join the pursuit of Science.

Examination on Gujarati shows that 2.5% of superior girls and 13.3% of average girls appeared for this examination. The difference between the two percentages is 10.8, which is though high is not significant. Hence both the types of girls appear for this examination can be concluded.

The other examinations passed by superior girls are on Music and Dancing. The percentages are 7.5 and 2.5 respectively. The average girls are not found in this examination.

All the above data on girls shows that the superior girls appear in various examinations whereas the average girls do not appear in all such examinations. The striking examinations in which superior girls appear and the average girls do not appear are : Science, Music and Dancing.

Table :36: Participation of Pupils in Extra-curricular Activities.

Kind	Boys		Girls		Adults
	Sup.	Ave.	Sup.	Ave.	Sup.
Dramatics	7 (3.5)	2 (2.2)	7 (7.7)	-	4 (11.8)
Music	8 (4.2)	2 (2.2)	6 (6.6)	4 (6.6)	1 (2.9)
Rashas	-	-	7 (7.7)	8 (13.3)	-
Sports	48 (24)	29 (31)	12 (30)	20 (33.3)	9 (26)
Debate	25 (12.5)	7 (7.7)	4 (10)	-	8 (23)
Writing	-	-	-	-	1 (2.9)
Nothing particular	104 (52)	50 (60.5)	16 (40)	28 (46.6)	

The observation of the above table reveals that 52% of superior boys and 60.5% of average boys do not show any inclination for any activity. The percentages are quite high. The second category worth nothing is about sports. In this activity we find 24% of superior boys and 31% of average boys participate. From these percentages we can say that the percentage of superior boys is less than the corresponding percentage of average boys, but when the same frequencies are seen, we find that the frequencies of superior boys are much more than that of the average boys.

In the case of debate, we find 12.5% of superior boys and 7.57% of average boys participate. In this activity the percentage of superior boys is slightly <sup>higher</sup> less than that of the average boys, and here also we find that the frequency of superior boys is much more than that of the average boys. When we look at the activity of Dramatics we find that 3.5% of superior boys and 2.2% of average boys participate in this activity. This shows that the percentage of superior boys is slightly more than that of the average boys. In the activity of Music we find that <sup>4.2%</sup> of superior boys and 2.2% of average boys take part in this activity. The percentage of superior boys is slightly more than that of average boys. No boy is found taking part in the activity of writing.

From the above discussion we find that the superior as well as the average boys take part in the similar activities. There is no vivid and varied interests of superior boys to the average boys. The gradation of interest in the activities according to the percentages in the case of superior boys is as follows : Sports, debate, music and dramatics. The same type of gradation in the case of average boys is as follows : Sports, debate, music and dramatics. In both the cases the gradation is virtually the same. Hence we conclude that there is not much difference between the two groups in the number and types of activities participated.

In the case of girls we find that 40% of superior girls and 46.6% of average girls do not take part in any activity. The activity of sports is participated by 30% of superior girls and 33.3% of average girls. The percentage of superior girls is less than that of the average girls. The difference between the two percentages is very low. In the activity of debate we find that 10% superior girls participated in this activity but no average girl is found in this activity. A similar type of participation is noted in the activity of dramatics. We find that 7.7% of superior girls participated in this activity and no average girl is found to have participated. The activity of Rashas shows that 7.7% of superior girls and 13.3% of average girls took part in this activity. The percentage of superior girls is much less than that of the average girls. The activity of music is participated by equal percentages of superior and average girls.

The above data about the girls shows that the number of activities participated by superior girls is five and the corresponding number in the case of average girls is only three. Hence we can conclude that the activities participated by the superior girls are more varied and more vivid, compared to average girls. The gradation of activities according to the percentage of participation in the case of superior girls is as follows: Sports, debates,

Rashas and Music and the same type of gradation in the case of average girls is as follows: Sports, Ras and Music. This shows that both the groups headed high in the sports. The average group did not take part in debate and dramatics.

The difference in the percentages of the groups in different activities were tested by t-test. We find that all these differences were not significant except the difference in the case of sports in the groups of boys.

This fact leads us to conclude that all groups participate in different activities but the activity of sports is an inborn interest of average boys.

The activities participated by the boys are the same whereas the activities participated by superior girls are more varied compared to the average girls.

Superior adults' group shows that 26% of them took part in sports, 23% took part in debates, 11.8% in dramatics and 2.9% of them took part in Music, 2.9% of them took part in writing. The gradation according to the percentages is as follows: Sports, Debate, Dramatics, Music and Writing.

From the above data it is noted that all the groups participated in higher percentages in first two activities, i.e., sports and debate.

Table 37: Economic Aid Received Through Self-support

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Yes	2 (1)	9 (10)	-	-
No	198 (99)	81 (90)	40 (100)	60 (100)

From the above data it is observed that in the case of boys, only 1% of superior boys and 10% of average boys try to get the self-economic support by working in some part-time jobs.

In the case of girls no girl either superior or average is found to be in the part time job for self economic support.

Table :38: Distinctions obtained in extra curricular activities.

Kind	Superior:Boys	Average:Boys	: Superior:Girls	Average:Girls	: Superior:Adults.
Yes	22 (11)	7 (7.7)	10 (25)	5 (8.3)	19 (55.9)
No	178 (89)	83 (92.3)	30 (75)	55 (91.7)	15 (44.1)

On the examination of the above data we find that only 11% of superior boys and 7.7 of average boys have obtained distinction in extra curricular activities. The percentages of superior boys and average boys who have not obtained distinctions in extracurricular activities are 89% and 92.3% respectively. Both these percentages are very high but the difference between them is 3.3% This is not very high but when this difference is tested for significance by a test we find the value 0.716 which is not significant. Hence we can conclude that superior boys do not have heigher percentage of distinctions compared to that of the average boys.

When the same data is seen in the case of girls, we find that 25% of superior girls and 8.3% of average girls obtained distinctions in extra curricular activities while 75% of superior and 97.7% of average girls have not obtained any distinctions in much less than that of the percentage of

girls who have not obtained distinctions. The difference between these percentage is 16.71. Which is very high and when this difference is tested statistically for its significance by a t-test we find the value to be 3.21 which is significant. Hence we can conclude that superior girls obtain more distinctions in extra curricular activities than the average girls.

The case of superior adults is also seen likewise. The data shows that 55.9% of them have obtained distinctions and 44.1% of them have not obtained any distinctions.

From this data, we can say that in the past the superior pupils took part in larger percentages than the superior pupils of the present day.

Table :39: Distinctions obtained in Academic Achievements.

Kind	Superior:Average		: Superior:Average:		Superior Adults.
	Boys	Boys	Girls	Girls	
Yes	49	19	20	14	23
	(24.5)	(21.1)	(50)	(23.3)	(67.7)
No	151	71	20	46	11
	(75.5)	(78.9)	(50)	(76.7)	(32.3)

On the observation of the above table, it is noted that 24.5% of superior boys and 21.1% of average boys have obtained distinctive academic achievements while 75.5% of superior boys and 78.9% of average boys have not obtained any academic distinctions. The difference between the percentages of these two groups is only 3.4 which is not so high, but when tested statistically for its significance by a t-test the t-score obtained is 0.09 which is not significant. Hence we can conclude that the distinction of superior boys are though higher in percentage, they are not much more than the average boys.

When it is seen in the case of girls, we find that 50% of superior girls and 23.3% average girls have obtained academic distinctions while 50% of superior girls and 76.7% of average girls have not obtained any academic distinction. The difference between these percentages show that it is 26.7. and it is very high. Hence we can conclude that the distinctions of superior girls is much higher than that of the average girls.

The distinctions in academic achievements, in the case of superior adults is note worthy. 67.7% of them have obtained distinctions while 32.3 of them have not obtained distinctions. Comparing this data with the superior pupils of to-day it is found that adults have more distinctions in academic achievements than that of the superior boys and girls. This is not so much the trend in the case of superior boys and girls.

Table :40: Participation of Subjects in Scouting and N.C.C.

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Yes	125 (62.5)	31 (34.1)	19 (47.5)	16 (26.6)
No	75 (37.5)	59 (65.9)	21 (52.5)	44 (73.4)

The above table shows that 62.5% of superior boys and 34.1% of average boys were the members of the troops either in scouting or in N.C.C. This shows that the percentage of superior boys is larger than that of the average boys. The difference between the two percentages is 28.4. This difference is very high and significant. Hence we conclude that the superior boys are more interested in participation in these activities as compared to that of the average boys.

In the case of girls, we find that 47.5% of superior girls and 26.6% of average girls were members in the troops of girls guides and N.C.C. These percentages show that the percentage of superior girls is larger than that of the average girls. The difference between the two percentages is 20.9. This difference is also very high and hence we conclude that superior girls

are more instrested in this activity as compared to average girls.

From the above discussion, we draw a valid conclusion that the percentage of superior pupils participating in such troops is larger than that of the average pupils. And in the case of superior boys the percentage of participatants is more than the percentage of non-participants while in all the other groups the percentage of non-participants is more than the percentage of participants.

When the above data was tested for its independence by  $\chi^2$  test, in the case of boys it was found to be 19.66. This value of  $\chi^2$  is very high and hence it is significant. Hence we can confirm our previous conclusion. In the case of girls also a  $\chi^2$  test was applied. The calculated value of  $\chi^2$  was 4.5877. This value is also (.05 level) significant. Hence we can confirm our previous conclusion and can say that a larger percentage of superior pupils take part in this activity.



Table:41: Kinds of Books preferred by the Subjects.

Literature	Superior	Average	Superior	Average
	Boys	Boys	Girls	Girls
1. Historical & Social Novels.	78 (39)	19 (21.1)	19 (47.5)	12 (20)
2. Autobiography	64 (32)	8 (8.8)	12 (30)	8 (13.3)
3. Short stories.	21 (10.5)	16 (17.7)	2 (5)	8 (13.3)
4. Fiction, Classics or Current	13 (6.5)	-	2 (5)	4 (6.6)
5. Detective Novels	10 (5)	-	4 (10.0)	-
6. Drama	9 (4.5)	2 (2.2)	1 (2.5)	-
7. Poetry	4 (2)	-	-	-
8. Humour or Satire	1 (0.5)	-	-	--
9. Essay	-	-	-	-
10. Nothing particular	-	45 (50)	-	28 (46.6)

On observing the table No.41, we find that the preferences of superior boys are many and varied whereas the preferences of average boys are few and limited. The data shows that the superior boys preferred eight types of literary books and the average boys preferred only

four types of literary books. Moreover 50% of average boys did not show any inclination for any type of literary taste but that is not the case with superior boys. Superior as well as average boys highly prefer to read historical and social novels. The percentages of them are 39 and 21.1 respectively. These percentages show that the percentage of superior boys is larger than that of the average boys. The difference between the two percentages is 17.9 which is very high. ( $t=2.954$ )

The second preference of superior boys is 'Autobiography' whereas the second preference of average boys is 'short-stories.' The section of autobiography shows that 32% of superior boys and 8.8% of average boys preferred autobiography. These percentages show that the percentage of superior boys is much more than that of the average boys. The difference between these two percentages is 23.2. This is very high and ( $t=4.233$ ) significant. Hence we conclude that superior boys prefer autobiography more than the average boys.

If we look at the section of short stories we find that 10.5% of superior boys and 17.7% of average boys preferred this section. This is the third choice of superior boys. These percentages show that the percentages of superior boys is less than that of the average boys. The difference between these two percentages is 7.2.

This difference is not very high. ( $t=1.517$ )

If the section on drama is observed we find that 45% of superior boys and 2.2% of average boys preferred this section. The percentage of superior boys is larger than that of the average boys. The difference between the two percentages is only 2.3.

All the other sections are exclusively preferred by superior boys. The section of Fiction, Classics or current is preferred by 6.5% of superior boys.

The Detective novels are preferred by 5% of superior boys. The section of humour and satire is preferred by only 0.5% of superior boys. The section of poetry is preferred by 2% of superior boys.

If we grade the preferences for the two groups, according to the percentages, we can list them as follows in the case of superior boys.

- (1) Historical and social novels
- (2) Autobiographies
- (3) Short stories
- (4) Fiction, Classics or Current
- (5) Detective novels
- (6) Drama
- (7) Poetry
- (8) Humour and satire

The gradation in the case of average boys is as follows :

- (1) Historical and Social Novels
- (2) Short Stories
- (3) Autobiographies
- (4) Drama

If we look at the data for girls we find that the preferences of superior girls are many and varied whereas the preferences of average girls are few and limited.

Superior girls preferred six sections of literature whereas the average girls preferred four sections of literature. It should also be noted that 46.6% of average girls did not show any inclination for any type of literary taste while that is not the case with superior girls.

Superior as well as average girls highly preferred historical and social novels. 47.5% of superior girls and 20% of average girls preferred this section. This shows that the percentage of superior girls is larger than that of the average girls.

The difference between the two percentages is 27.5. This difference is very high and hence significant. The second preference of both these groups is on autobiographies. The percentage of superior girls is 30 and that of the average girls is 13.3. This shows that the percentage of superior girls is larger than that of the average girls. The difference between these two percentages is 16.7. This is also very high and significant.

The choice of both the groups on short stories shows that 5% of superior girls and 13.3% of average girls preferred this section. Here the percentage of superior girls is less than that of the average girls. The difference between the two percentages is 8.3. The next section which is preferred by both the groups is Fiction, Classics or Current. 5% of superior girls and 6.6% of average girls preferred this section. The percentage of superior girls is slightly less than that of the average girls.

The sections exclusively preferred by superior girls are Detective novels and Drama.

The percentages of superior girls in these sections are 10% and 2.5% respectively.

If the gradation of these sections are arranged in terms of percentages for both groups we find that the

taste of the superior girls is as follows :

- (i) Historical and social novels
- (ii) Autobiographies
- (iii) Detective novels
- (iv) Short Stories
- (v) Fiction, Classics or Current
- (vi) Drama.

The list of gradation in the case of average girls is as follows :

- (i) Historical and social novels
- (ii) Autobiographies
- (iii) Short stories
- (iv) Fiction Classics or currents

From the above gradations we conclude that all the groups of pupils preferred to read historical and social novels in large percentage. This section does not show any difference between the superior and the average pupils.

The next preference of all the groups except the average boys group is on autobiographies. This shows that all the three groups of pupils preferred to read autobiographies.

The sections that are exclusively read by superior pupils are detective novels. Humour and satire and poetry.

The section on Essays is not read by any group of pupils.

Table :42: Articles contributed in Magazines by Subjects

Kind	Boys		Girls	
	Sup.	Ave.	Sup.	Ave.
Yes	76 (38)	10 (11.1)	16 (40)	12 (20)
No	124 (62)	80 (88.9)	24 (60)	48 (80)

On examining the above data we find that 38% of superior boys and 11.1% of average boys contributed articles during the secondary school career. This shows that the percentage of superior boys is much more than the corresponding percentage of average boys. The percentage of superior boys who did not contribute any article during the school career is 62 and the corresponding proportion of average boys is 88.9. This shows that the percentage of superior boys is much less than that of the average boys. We may also note that the percentage of contributors is much less than that of the non-contributors in both these groups.

When the above data was tested for its independence by a  $\chi^2$  test, it was found that the value of  $\chi^2$  obtained was 21.51 which is highly significant. Hence we conclude

that contribution of articles and superior ability of the boys are interrelated.

In the case of girls we find that 40% of superior girls and 20% of average girls contributed articles during the secondary school career. This shows that the percentage of superior girls is much more than that of the average girls. The difference between the two percentages is 20 and the percentages of superior and average boys who did not contribute any article during the career are 60 and 80 respectively. This shows that the percentage of contributors is less than that of the non-contributors. When the above data was tested for its independence by  $\chi^2$  test, the value of  $\chi^2$  is 4.76 which is also highly significant. Hence we conclude that the contribution of articles and superior ability of the girls are interrelated.

From the above data we mark a tendency of larger percentage, contributing articles from the group of superior pupils.

Table : 43: Quality of leadership In Subjects:

Kind	Boys		Girls	
	Superior	Average	Superior	Average
Yes	60 (30)	18 (20)	12 (30)	20 (33.3)
No	140 (70)	72 (80)	28 (70)	40 (66.6)

The above table shows that 30% of superior boys and 20% of average boys have worked as leaders in some groups where as 70% of superior boys and 80% of average boys have not worked as leaders. This shows that the percentage of superior boys who have worked as leaders is larger than that of the average boys. The difference between these two percentages is 10 . We also note that the percentage of boys who have worked as leaders is much less than the boys who have not worked as leaders.

When the above data is tested by  $\chi^2$  test it was found that the  $\chi^2$  to be 3.158 which is not significant. This leads us to conclude that superior ability of the boys do not helps to develop the quality of leadership.

When the data about the girls is observed we find that 30% of superior girls and 33.3% of average girls possess the

quality of leadership where as 70% of superior girls and 66.6% of average girls do not possess the quality. This shows that the percentage of superior girls with this quality is less than that of the average girls. The difference between the two percentages is only 3.3 and percentage of girls having this quality is much less than of the girls without this quality, in both the groups.

When this data was tested by  $\chi^2$  test the  $\chi^2$  is found 0.1226. This value is not significant and the superior ability does not contribute so much positively to this quality.

Here we find the same conclusions for boys and girls.

Table : 44: Fields of Study selected by Subjects.

Fields	Boys			Girls	
	Superior	Average	Superior	Average	Superior
Arts	5 -	5 (5.5)	8 (20)	48 (80)	13 (38.2)
Science	189 (94.5)	67 (74.5)	31 (77.5)	12 (20)	21 (61.8)
Commerce	11 (5.5)	18 (20)	1 (2.5)	-	-

The above table shows that the major field of study selected by superior boys as well as average boys is 'Science'. This data shows that 94.5% of superior boys and

and 74.5% of average boys selected this field of science. The percentages of superior boys is larger than that of the average boys. The difference between these two groups is 20%. This difference is very high when this data was analysed statistically and  $\chi^2$  test was, applied for testing the Independence we found that  $\chi^2$  is 16.04. This value is highly significant. Hence we can conclude that the superior boys tend to select the field of science. The second field of study selected by superior as well as average boys is of 'Commerce'. 5.5% of superior boys and 20% of average boys selected this field. The percentages of superior boys is much less than that of the average boys. The last field which is selected by only average boys is of Arts. Only 5.5% of Average boys selected this field. No superior boy has selected the field of arts.

In the case of girls we find that 77.5% of superior girls and 20% of average girls selected the field of Science this shows that the percentage of superior girls is much more than the corresponding percentage of average girls. The difference between the two percentages is 57.5%. This difference is high and significant. The next field of selection for both the groups of girls is of Arts 20% of superior girls and 80% of average girls selected this field of Arts. The percentages of average girls is much more than that of the superior girls. The difference between the two percentages is 60. This difference is very high and significant. The

third field of study shows that only 2.5% superior girls selected this field of Commerce. No average girl select this field.

The above data when analysed statistically and was tested for significance by a  $\chi^2$  test. We found that  $\chi^2 = 34.02$ . This value is very high. Hence we conclude that the majority of superior girls selected the field of science. The proportion of superior girls is larger than that of the average girls.

From the conclusion, we find that superior pupils selected the field of science in greater proportion than the other fields.

The preferences in the case of the boys are science, Commerce and Arts. Where as the preferences in the case of girls are Science, Arts and Commerce.

In the case of superior adults we find that 38.2% of them selected the field of Arts where as 61.8% of them selected the field of science.

These two percentages show that the first preferential field of superior adults is of science and the second one is of Arts. No one of them selected the field of Commerce.

This shows that the major field of selection of superior adults are, Science, Arts and Commerce.

Table: 45: Preferences of Vocational Interests by Subjects.

Vocations:	Boys			Girls			Superior Adults.
	Superior.	Average.	t Score	Superior	Average.	t Score	
Doctors.	55 (27.5)	10 (11.1)	3.098	20 (50)	-		13
Engineers.	127 (63.5)	21 (23.3)	6.778	2 (5)			1
Social Workers.	-	5 (5.5)		2 (5)	12 (20)	0.6699	-
College Teachers	2 (1)	8 (8.8)	3.381	8 (20)	36 (60)	1.248	-
Commerce.	14 (7)	20 (22.2)	3.681	1 (2.5)	-		-
Salesman.	-	2 (2.2)		1 (2.5)			
Librarian	-	1 (1.1)		1 (2.1)	-		2
Poet.	1 (0.5)	3 (3.3)	1.899	1 (2.5)	4 (6.6)	0.2926	1
Chemist.	-	12 (13.3)		1 (2.5)	-		-
Actor	1 (0.5)	2 (2.2)	1.328	-	-		-
Pleader	-	6 (6.6)		-	4 (6.6)		-
Music Teacher.	-	-		-	-		1
Domestic work.	-	-		3 (7.5)	4 (6.6)	0.05479	-

The examination of the above table shows that the major vocations selected by superior as well as average boys are Engineering, Medicine, and Commerce. The vocations of engineering is rated by 63.5% of superior boys and 23.3% of average boys. This shows that the percentage of superior boys is much more than that of the average boys. The difference between the two percentages is 40.2%. This is a very high difference. When this difference was tested for its significance by a t-test, we found that the value of t was 6.778 which is highly significant. Hence we can conclude that the vocation of Engineering is preferred more by superior boys compared to that of the average boys. The second vocation which is preferred by superior boys is of medicine. We find that 27.5% of superior boys and 11.1% of average boys rated this vocation. This shows that the percentage of superior boys is more than that of the average boys. The difference between the two percentages is 16.4 . This is a very ~~much~~ high difference and hence it was tested for its significance by a t-test. The value of t obtained was 3.098 which is highly significant. Hence we conclude that the percentage of superior boys is larger than that of the average boys who rated this vocation.

From the above discussion we can note that the majority of superior boys rated medicines and engineering very high while the other vocations are rated by them are not so very high. 91% of superior boys rated engineering and medicine

while 9% of them rated other four vocations. Hence we can say that superior boys rated only six vocation. The list of preferences are as follows :

(i) Engineering, (ii) Medicine, (iii) Commerce, (iv) College teachers, (v) Poet & (vi) Actor.

In the case of average boys we find that 34.4% of them rated engineering and medicine vocations while 22.2% of them rated commerce, 8.8% of them rated college teachers, 6.6% of them rated pleading, 13.3% of them rated chemists. The preferred test of vocations for this group are as follows :

(1) Engineering, (ii) Commerce, (iii) Chemist, (iv) Medicine, (v) College teacher, (vi) Pleader, (vii) Social workers, (viii) Poet & others.

From the above data it seems that the rating of the superior boys is limited to six vocation only where as that of the average boys is extended to eleven vocations. This leads us to conclude that the choices of vocations of average group are many and vivid while the choices of superior group are few and limited.

In the case of girls, we find that 50% of superior girls rated medicine as their vocation of choice and 20% of them rated the vocation of college teachers. The percentages for these vocations in the case of average girls are 0% and 60% respectively. The percentage in the vocation of medicine

for superior girls is larger than that of the average girls, and the proportion in the vocation of college teachers average girls is more than that of the superior girls. The difference between the two proportions of two groups in these two vocations are highly significant. This leads us to conclude that the superior girls rate the vocation of medicine in large proportion than that of the average girls and the proportion of superior girls is much less than that of the college girls, rating the vocation of college teachers.

The preference list of vocations for superior girls is as follows : (i) Medicine, (ii) College teachers, (iii) Domestic work (iv) Engineering, (v) Social Work & others. Whereas the preference list of vocations for average girls is as follows : (i) College teachers, (ii) Social Workers, (iii) Poet, (iv) Pleader, (v) Domestic work.

The examination of this data shows that the number of preferences in the case of superior number of girls is ten, and that of the average girls is only five.

This leads us to conclude that the choices of superior girls are many and vivid whereas the choices of the average girls are few and limited.

In the case of superior adults group we find that out of 34 superior adult only 18 of them have responded and 16 of

them have not responded. Out of the 18 respondents 13 responded and rated medicine as their first preference of vocation and 2 of them rated the vocation of Librarian and the others rated the vocations of Engineering, poet, & Music teacher. This shows that the choices of the vocations of the superior adults are only five. Out of 13 vocations they rated five vocations hence we conclude that their choices of the vocations are few and limited.

Table : 46: Height as Reported by Subjects.

Height in Inches.	Boys		Terman's Results.	Girls		Terman's Results.
	Superior.	Average.		Superior	Average.	
81	-	-	1	-	-	-
80	-	-	-	-	-	-
79	-	-	1	-	-	-
78	-	-	1	-	-	-
77	-	-	7	-	-	-
76	-	-	12	-	-	-
75	2	1	27	-	-	-
74	-	-	47	-	-	-
73	-	-	48	-	-	-
72	1	-	124	-	-	1
71	3	1	115	-	-	5
70	6	-	92	-	-	6
69	10	3	82	-	-	13

Height in Inches	Boys		Terman's Results.	Girls		Terman's Results.
	Superior	Average		Superior	Average	
68	19	7	73	-	-	38
67	30	10	41	-	-	69
66	35	13	24	1	-	80
65	31	19	9	4	-	88
64	25	10	3	2	4	94
63	15	11	1	4	4	67
62	13	5	-	7	-	61
61	8	4	-	6	-	26
60	1	5	-	8	20	15
59	-	2	-	5	8	2
58	-	-	-	3	12	1
57	1	-	-	-	4	-
56	-	-	-	-	-	1
55	-	-	-	-	-	-
54	-	--	-	-	-	-
53	-	-	--	-	-	-
52	-	-	-	-	4	-
51	--	-	-	-	4	-
Total:	200	90	708	40	60	568
Mean :	65.6401	64.6887	70.65	61.375	58.6	64.69
S.D. :	2.578	2.475	2.58	2.117	3.303	2.39
S.E. :	0.181	.2609	-	.3348	.4264	
t-score:		3.018			5.111	

Information on height is requested in the questionnaire and is supplied by 200 superior boys, 40 superior girls, 90 average boys and 60 average girls. The superior boys and the average boys are of the age  $21\frac{1}{2}$  and the superior and average girls are of the age  $18\frac{1}{2}$ . The distributions are given in Table No.46.

The range for superior boys is from 57" to 75" with a mean of 65.6401" and S.D. 2.578 and S.E. 0.1811. The range of average boys is from 59" to 71" with a mean of 64.6887" and S.D. 2.475 and S.E. 0.2609. To find out the significant difference between the two groups, t -score is calculated. t-score obtained is 3.018 which is significant at .05 level as well as at .01 level. Hence it can be inferred that the Boys in the superior group are taller than the Boys in the average group.

The range for superior girls is from 58" to 66" with a mean of 61.3757" and S.D. 2.117 and S.E. 0.3348. The range for average girls is from 51" to 64" with a mean of 58.6" and S.D. 3.303 and S.E. 0.4264. The t-score obtained is 5.111 which is significant at 0.05 level as well as at 0.01 level. Hence it can be inferred that the superior girls are taller than the average girls.

The average height of superior boys and superior girls is more than the average height of average boys and average girls. If the averages are compared with Terman's results, we can infer that the average Indian Boy and girls are smaller than the average boys and girls in America.

Table : 47: Weight as Reported by Subjects.

Weight in Lbs.	Boys		Girls	
	Superior:	Average	Superior:	Average
70-75	-	-	-	20
76	-	-	-	-
77	-	-	-	-
78	-	-	-	-
79	1	-	-	-
80	1		2	
81	-		-	
82	-	1	-	20
83	-		-	
84	1		1	
85	2	-	2	-
86	1	1	-	-
87	-	-	-	-
88	2	-	1	-
89	-	-	-	-
90	10	-	5	-
91	1	-	1	-

Weight in Lbs.	Boys		Girls	
	Superior	Average	Superior	Average
92	2	1	3	4
93	-	-	-	-
94	-	1	1	-
95	5	3	3	4
96	4	2	1	-
97	2	-	-	-
98	3	10	1	-
99	3	1	-	-
100	13	4	7	4
101	3	1	2	-
102	9	2	4	-
103	2	1	-	-
104	1	2	1	-
105	10	13	-	8
106	2	1	1	-
107	4	-	-	-
108	2	3	1	-
109	3	-	-	-
110	18	15	-	-
111	2	2	-	-
112	9	2	1	-
113	2	-	-	-
114	5	-	1	-

Weight in Lbs.	Boys		Girls.	
	Superior:	Average	Superior	: Average
115	14	7	1	-
116	8	-	-	-
117	1	-	-	-
118	2	-	-	-
119	2	-	-	-
120	11	1	-	-
121	1	-	-	-
122	3	1	-	-
123	5	2	-	-
124	1	1	-	-
125	1	1	-	-
126	1	1	-	-
127	6	-	-	-
128	4	2	-	-
129	-	-	-	-
130	3	-	-	-
131	-	-	-	-
132	2	1	-	-
133	1	-	-	-
134	1	-	-	-
135	2	1	-	-
136	-	1	-	-
137	-	-	-	-
138	1	1	-	-

Weight in Lbs.	Boys		Girls	
	Superior	Average	Superior	Average
139	-	-	-	-
140	4	2	-	-
141	-	-	-	-
142	-	-	-	-
143	-	-	-	-
144	-	-	-	-
145	1	-	-	-
146	-	-	-	-
147	-	1	-	-
148	1	-	-	-
149	-	1	-	-
150	-	-	-	-
151	-	-	-	-
152	-	1	-	-
153	-	-	-	-
154	-	-	-	-
155	1	-	-	-
Total:	200	90	40	60
Mean :	110.625Lbs.	110.67Lbs.	96.875	85.67
S.D. :	13.675	13.055	8.21	10.875
S.E. :	0.9968	1.375	1.298	1.404
t-score:	0.02677		5.859	

Information on weight is requested in the questionnaire and is supplied by 200 superior, boys, 40 superior girls, 90 average boys and 60 average girls. The superior boys and the average boys are of the age 21+ and the superior and average girls are of the age 18+.

The table No. 47 gives the arithmetic mean and standard deviation of the weights of superior and average Boys and girls.

The range of weight of superior boys is from 79 lbs. to 155 lbs. with a mean of 110.625 and S.D. 13.675 and S.E. 0.9668. The range of weight of average boys is from 80 lbs to 152 lbs. with a mean of 110.67 lbs. and S.D. 13.055 and S.E. 1.375. The t-score is 0.02677 which is not significant. Hence it can be inferred that the boys in the superior group are not higher in weight than the boys in the average group.

The range of weight of superior girls is from 80 lbs. to 115 lbs. with a mean of 96.875 lbs. and S.D. 8.210 and S.E. 1.298. The range for average girls is from 75 Lbs. to 105 lbs. with a mean of 85.67 lbs. and S.D. 10.875 and S.E. 1.400. The t-score is 5.859 which is significant, hence it can be inferred that the superior girls are more in weight than the average girls. This shows that the superior girls rank above the average girls in weight.

Table : 48(A) : Chest Girth of Pupils.

Chest girth (Normal) in inches.	Superior Boys	Average Boys	Superior Girls	Average Girls
29	1	3	1	4
29.5	1	6	4	6
30	27	13	8	14
30.5	23	43	21	26
31	97	8	2	7
31.5	13	12	2	1
32	11	2	1	2
32.5	27	2	1	-
33	-	1	-	-
Total:	200	90	40	60
Mean :	31.08"	30.48"	30.43"	30.3"
S.D. :	0.75	0.55	0.647	0.63
t - score:		6.6		1.08

Table : 48(B) : Chest Girth of pupils.

Chest girth in inches (Expanded)	Superior Boys	Average Boys	Superior Girls	Average Girls
31	-	-	-	20
31.5	-	-	4	40
32	2	84	9	-
32.5	107	4	27	-
33	91	2	-	-
Total:	200	90	40	60
Mean :	32.72"	32.09"	32.28"	31.33"
S.D. ;	0.26	0.18	0.33	0.23
t-score:	21.00		17.00	

Information of this type is secured from 200 superior boys, 90 average boys, 40 superior girls, and 60 average girls. On the examination of the table 48(A), it is observed that the chest girth ranges from 29" to 33". In the case of superior boys it ranges from 29" to 32.5", while in the case of average boys it ranges from 29" to 33".

The average chest girth of superior boys is 31.8" with S. D. 0.75 and the average chest girth of average boys is 30.48" with S.D. 0.55 when this data is compared statistically and

a t-test is applied to find out the significance it is found that the value of  $t$  is 6.6 This t-score is found to be highly significant. Hence a conclusion can be drawn from this, is, that the superior boys have a wider chest girth compared to that of the average boys.

In the case of girls it is found that the range of <sup>girth of</sup> superior girls is from 29" to 32.5", while the range of <sup>the same for</sup> average girls is from 29" to 32". The average chest girth of superior girls is 30.43" with S.D.0.647, the same of the average girls is 30.3" with S.D.0.63. This data is compared statistically and a t-test is applied. The t-score is found to be 1.08. This t-score is found to be not significant and hence we can conclude that the superior as well as the average girls do not differ so much in their chest-girth measurements. Though the superior girls possess slightly wider chest-girth it does not make a significant difference.

From this data it seems that the superior boys possess wider chest girth compared to average boys and the difference is significant but the same picture is not maintained in the case of girls. It seems from the data that the superior pupils possess wider chest girth compared to average pupils. Hence it can be said that the superior pupils possess a stamina which is higher than average pupils.

The data about the chest girth, that we have seen above is about the normal position but the table 48(B) gives us the data about the expanded chest girth.

The information is obtained from the same groups of pupils and it is found that the expanded chest girth ranges from 31" to 33".

In the case of superior boys it is noted that it ranges from 32" to 33" and the same in the case of average boys is also from 32" to 33". The average of superior boys is 32.72" with S.D. 0.26 and the average of average boys is 32.09" with S.D. 0.18. When this data is compared statistically, it is found that the t-score is 21 which is highly significant. Hence it can be concluded that the superior boys can expand their chest girth wider than the average boys.

In the case of girls, it is observed that the range of the chest girth is from 31.5" to 32.5" in the group superior girls and the same in the group of average girls is from 31" to 31.5". The means of superior and average girls chest girth is 32.28" and 31.33" respectively. The respective S.Ds. are 0.33 and 0.23. The data is compared for the significance, it is found that the t-score is 17. Which is highly significant. Hence it leads us to conclude that the superior girls can expand their chest girth wider than the average girls. This means that the stamina of superior girls is more than the average girls. Here, it can be noted that the superior

pupils, comparatively expand their chest girth much wider than the average pupils.

From the above data it seems that the superior pupils are healthier than the average pupils and hence it rejects the traditional belief about the superior pupils.

The results are quite in resonance with the monumental work of Terman.

Table : 49 : Circumference of Head.

Circumference of Head in inches.	Superior Boys	Average Boys	Superior Girls	Average Girls
Below 16	-	3	-	-
16	6	-	-	-
17	-	-	-	-
18	4	-	-	-
19	2	1	-	-
20	6	-	1	-
21	18	6	8	-
22	50	11	3	1
23	5	5	4	-
24	2	1	-	-
Above 24	-	1	-	-
Total:	93	28	16	1
Mean :	20.15"	21.00"	21.63"	22"

Most of the pupils have not supplied this information. Hence the responses that are received are analysed here.

The information is collected from 93 superior boys, 28 average boys and 16 superior girls along with 1 average girls.

The means of these are calculated. The average circumference of the head of superior boys is 20.15" while that of the average boys is 21". The mean circumference of the head of superior girls is 21.63" while that of the average group is 22".

From the data it seems that superior pupils have the circumference of the head less than that of the average pupils. The difference between the means of the boys groups and the girls groups is not very high so statistical calculations are not done. The circumference of the headskull is not the attribute of superiority.

Table : 50: Medical Examination Results.

	Superior:Average		t Score	Superior:Average		t Score
	Boys	Boys		Girls	Girls	
Vision	76 (38)	14 (15.4)	3.833	15 (37.5)	8 (13.2)	0.8958
Hearing	-	1 (1.1)	-	-	-	-
Tonsils	18 (9)	6 (6.7)	0.6573	8 (20)	4 (6.6)	0.6397
Teeth	1 (0.5)	-	1	1 (2.5)	-	-
Under Nourshed	3 (1.5)	5 (5.6)	1.967	-	-	-
Headache	4 (2)	4 (4.5)	1.345	-	4 (6.6)	-
Kidney	3 (1.5)	-	-	-	-	-
Diet	1 (0.5)	-	-	-	-	-
Nothing particular	94 (47)	60 (66.6)	3.094	16 (40)	44 (73.3)	1.053
Total:	200	90		40	60	

The medical examination results show that 38% of superior boys and 15.4% of average boys use glasses. The difference between these two percentages is very high and seems significant. When the difference is tested by a t-test, it is found to be 3.833. This result shows that difference is

significant. Hence we can conclude that the superior boys use the glasses more often than the average boys.

When the same groups are examined in other disabilities, it is found that no superior boy suffer a hard of hearing while only one average boy suffers this defect.

In the case of tonsils, it is found that 9% of superior boys and 6.7% of average boys suffers this diseases. The difference between these two percentages is very small. This difference is tested a t-test for its significance. The value of t-score, obtained is 0.6573. This is not significant. Hence the conclusion that can be drawn from this, is that superior as well as average boys suffer this disease and the superiority and tonsils' disability are independent attributes.

The defective teeth are possessed by one superior boy and no average boy is found to possess this defect.

Undernourishment is the other defect which is recorded during the medical examinations in the schools. In the case of boys we find that 1.5% of superior boys and 5.6% of average boys show this defect. The difference is tested for its significance by a t-test. The t-score obtained is 1.967 . This value is found significant at .05 level of confidence but not at the 0.01 level of confidence. Hence we can conclude

that out of 100 cases only 5 are the cases due to chance and this is a common defect among the average boys.

The headache is other disability which recorded. It is found that 2% of superior boys and 4.5% of average boys suffered this disability. The difference between the two percentages is not very high. When this is tested by a test, it is found that the t-score is 1.345. Which is not significant. Hence it can be concluded that headache is not the defect of any group in particular.

The defective kidney is possessed by 1.5% of superior boys, and the only 0.5% of superior boys show defective diet. No average boy is found in these defects.

There are 47% of superior boys and 66.6% of average boys who do not have any kind of above mentioned defects. This shows that the percentage of average boys is more than the superior boys. When this difference is the percentages is tested by a t-test, the t-score is obtained to be 3.094. This difference is highly significant, hence it can be concluded that the average boys suffered less than the superior boys.

When the above data is analysed in 2x2 table by a  $\chi^2$  test, the value of  $\chi^2$  is obtained to be 5.363. This shows that the value obtained is significant. Hence we can conclude that superior ability and physical disability are interrelated.

Physical defects attributes towards superiority.

The order of the disabilities in the case of superior boys is as under :

- (1) Defective vision, (2) Defective tonsils, (3) Headache,
- (4) Undernourishment, (5) Kidney, (6) Teeth & (7) Diet.

While that of the average boys is as follows :

- (1) Defective vision, (2) Tonsils, (3) Undernourishment,
- (4) Headache & (5) Defective hearing.

This order shows that both the groups are similar in first two defects and the suffering of superior boys are many and vivid while that of the average boys is less and certain.

In the case of girls, we find that 37.5% of superior girls and 13.2% of average girls use glasses. The difference between the two percentages is very high. When this was tested by a t-test. It is found that the t-score is 0.8958. This value is not significant. Hence we can conclude that the use of glasses is common in both the groups and is not the attribute only of superior girls.

When the defect of tonsils is observed, we find that 20% of superior girls and 6.6% of average girls possess this defect. The difference seems to be high but when it is tested by a t-test. The value of t-score obtained is 0.6397. This value is not significant. Hence it can be concluded that

though the superior girls suffered this defect it is not the attribute of them only.

Only 2.5% of superior girls possess the defective teeth. 6.6 % average girls suffer headache.

40% of superior girls and 73.3% of average girls do not have any suffering. This difference is not significant as the value of t-score obtained is 1.033.

When the data about the girls is further analysed by a  $\chi^2$  test, it is four that the value of a  $\chi^2$  test is 11.1. This value is significant. Hence we can conclude that the superiority of the girls and defective physical ability are interrelated.

Table : 51 : Distribution of pupils according to their Physical Defects.

Kind.	Superior Boys	Average Boys	Superior Girls	Average Girls	Seperior Adults.
Yes	6 (3)	2 (2.2)	-	-	1 (2.94)
No	194 (97)	88 (97.8)	40 (100)	60 (100)	33 (97.06)

On looking to the above data we find that superior as well as average pupils have very little percentage who have physical disability.

In the case of boys we find that only 3% of superior boys and 2.2% average boys suffered accidental physical disability.

The difference between these two percentages is negligibly small.

The percentages of the sufferers are much less than that of the non-sufferers in both the group of boys. To understand the attribute of these defects a  $\chi^2$  test is applied. The calculated value obtained is 0.14. This value is negligibly small hence it can be concluded that the superiority and physical defects are independent of one another.

When the same data is seen in the case of girls, it is noted that none of them from both groups, is found to have such a defect. In other words all the girls either superior or average do not have any physical deformity.

In the case of superior adults group is noted that only 2.94% of them suffered this type of defect while 97.06% enjoyed the life without such a defect.

Table : 52: Occurrence of syrgical operation.

	Superior Boys	Average Boys	Superior Girls	Average Girls	Superior Adults.
Yes	25 (12.5)	8 (8.8)	9 (22.5)	4 (.6.6)	15 (44.1)
No	175 (87.5)	82 (91.2)	32 (77.5)	56 (93.4)	19 (55.9)

On the examination of the above table it is noted in the case of boys that only 12.5% of superior boys and only 8.8% of average boys were operated while 87.5% superior boys and 91.2% of average boys did not get operated. Hence, from the data it seems that the percentage of the occurrence of surgical operations is much less compared to the non-occurrence of the same. When this data is further analysed statistically and  $\chi^2$  is calculated it is found to be 0.8028. This is not significant. Hence we can conclude that occurrence of surgical operation and superiority are independent.

When the same data is examined in the case of girls we find that 22.5% of superior girls and 6.6% of average girls met with some type of surgical operations while 77.5% of superior girls and 93.4% of average girls did not meet with any such operation. The percentage of occurrence of surgical operation in the case of superior girls is more than that of the average girls, when this data is further analysed statistically, the value of  $\chi^2$  obtained is 0.532, which is not significant. Hence we can confirm the above conclusion.

In the case of superior adults we find that 44.1% of them suffered some surgical operation while 55.9% of them have not met with the same.

The details about the operation carried out are as follows :

Appendicitis, Tonsils, Hydrocil, Hernia, Gall Bladder, Rickets and Cataract.

Table: 53: Kinds of Handedness of Subjects.

Kind	Superior:Boys	Average:Boys	Superior:Girls	Average:Girls.	Superior:Adults
Right Handedness	193 (96.5)	87 (96.7)	40	60	33 (97.1)
Left Handedness	7 (3.5)	3 (3.3)			1 (2.9)

It is believed that those who can write or do the work with left hand are superior. To test this belief the data is collected and tabulated in this table.

The tabulated data about the boys shows that 96.5% of superior boys and 96.7% of average boys possess right handedness while 3.5% of superior Boys and 3.3% of average boys possess left handedness. The difference in these percentages are very small. Hence we can conclude that the left or right

handedness and superiority are independent when  $\chi^2$  is calculated the value is found to be 0.005178. This is also not significant. Hence the above conclusion is confirmed.

When the data is observed in the case of girls it is found that all the girls possess right handedness. No girl student is found to possess lefthandedness.

In the case of superior adults we find that 97.1% of them possess right handedness and 2.9% of them possess left handedness.

Thus the possession of the handedness is independent of superiority.

Table:54: Number of fingers in hands or feet.

Kind	Superior: Boys	Average: Boys	Superior: Girls	Average: Girls	Superior Adults.
Five	200	90	40	60	34
Less or more than five	-	-	-	-	-

No subject from any of the above<sup>1</sup> mentioned group is found to possess more or less number of fingers than the usual number.

Table : 55(A) : Self-Ratings of Interest in Fourteen Specific Fields.

Kind.	:Superior:Average: Terman's: Superior:Average: Terman's:		Boys' Mean for Boys' Mean for		Boys' S.D. Boys' S.D.		Superior Adults.	
	Boys' Mean	Boys' Mean	Boys' S.D.	Boys' S.D.	Mean	S.D.	Mean	S.D.
Travel	1.58	2.03	1.03	1.50	1.0	1.03	2.09	1.03
Sports	2.29	3.26	1.07	1.71	1.0	3.00	3.00	1.17
Religion	3.00	2.91	1.20	1.70	1.0	2.60	2.60	1.55
Mechanics	2.29	3.40	1.50	1.66	1.2	4.15	4.15	1.00
Social Life	2.79	3.26	1.20	1.66	0.9	2.62	2.62	1.3
Literature Reading	2.26 X	3.03	1.20	1.65	1.0	1.65	1.65	0.88
Literature Writing	3.53 X	3.94	1.30	1.63	1.1	3.20	3.20	1.5
Music	2.68	3.37	1.40	1.61	1.1	3.03	3.03	1.4
Arts	2.9	3.61	1.32	1.58	1.1	3.56	3.56	1.1
Science	1.504	2.33	0.87	1.69	1.1	2.0	2.0	1.13
Politics	2.68	3.31	1.37	1.56	1.1	2.43	2.43	1.13
Domestic Arts	3.63	3.84	1.30	1.31	1.0	3.9	3.9	0.25
Pets	4.25	3.92	1.10	1.45	1.1	4.22	4.22	1.19
Commerce	3.93	3.83	1.10	1.61	-	4.31	4.31	0.96
Average of Means.	2.8	3.28				3.05		

Table : 55(B) : Self Ratings of Interest in Fourteen Specific Fields.

Kind	Superior: Average : Girls' Mean		Terman's : Mean for Women.		Superior:Average : Girls S.D.		Terman's S.D.	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Travel	1.92	1.26	2.0	1.1	1.0	1.0	1.0	1.0
Sports	2.12	2.4	2.9	1.0	1.3	1.1	1.1	1.1
Religion	2.77	2.66	3.5	1.27	1.24	-	-	-
Mechanics	3.67	4.66	4.1	1.8	1.01	1.0	1.0	1.0
Social Life	2.62	2.2	2.7	1.4	1.3	0.8	0.8	0.8
Literature Reading	1.87	1.73		1.15	1.12			
Literature Writing	3.47	3.8	1.9	1.4	1.41			0.7
Music	2.57	3.0	2.1	1.4	1.6			1.0
Arts	2.22	3.0	2.6	1.3	1.8			1.0
Science	1.82	2.3	2.9	1.02	1.7			1.1
Politics	2.98	3.0	2.9	1.1	1.47			1.2
Domestic Arts	2.87	2.73	2.6	1.4	1.52			1.2
Pets	3.97	3.3	2.9	1.4	1.8			1.2
Commerce	4.22	3.9	-	1.6	1.47			-
<b>Average of Means.</b>	<b>2.8</b>	<b>2.85</b>						

Part of item in the General Information Blank called for self-ratings of interest in 14 specific fields: Travel, outdoor sports, religion, mechanics, social life, literature, reading, literature writing, music, arts, science, politics, domestic arts, pets and commerce. The ratings were on five-point scale. 1 being defined as 'very much', 3 as 'average' and 5 as 'none'. A cross-on-line technique was used. Such ratings were made by 200 superior boys, 90 average boys, 40 superior girls, 90 average girls and 34 superior adults. Table 55 gives the mean ratings and standard deviations separately for the sexes. It is possible that there may have been some tendency for subjects to rate themselves in relation to a hypothetical average, thus spuriously reducing the apparent amount difference, but the data obtained provide no check on this possibility. Perhaps most readers would agree that in general the fields in which mean ratings were high are desirable interests. The converse can hardly be maintained.

Table 55(A) deals with the interests of boys. On observing this data, we find that mean interest in the fourteen fields combined, for superior boys 2.8 points whereas that of the average boys is 3.28 points. This shows that the group of superior boys is higher than the group of average boys.

When all the fourteen fields are considered individually and t-test is applied to find the significance, it is found

that the following fields are differing significantly :

Travel (t=2.6), Sports (t=5.1), Mechanics (t=4.6), Literature Reading (t=4.05), Music (t=3.63), Arts (t=3.7), Science (t=4.37), Politics (t=3.3).

In all these fields superior boys are found to be higher in their interests.

The five fields rated highest by superior boys are :

1.Science, 2.Travel, 3.Literature reading, 4.Mechanics, 5.Sports.

The five fields rated highest by average boys are :

1.Travel, 2.Science, 3.Religion, 4.Literature reading and 5.Sports or Social Life.

The two fields rated lowest by superior boys are :

(1) Pets and (2) Commerce; and those of average boys are : Literature writing and Pets.

The mean interest of superior adults is 3.05 points which is slightly lower than the superior boys group.

Table 55 (B) deals with the interests of girls. On observing this data, we find that mean interest in the fourteen fields combined, for superior girls is 2.8 points whereas that of the average girls is 2.85 points. This shows that both the groups are identical in their choices.

When all the fourteen fields are considered individually and t-test is applied to find the significance, it is found that the following fields are differing significantly:

(1) Travel ( $t=3.1$ ), (2) Mechanics ( $t=3.2$ ),  
(3) Commerce ( $t=3.2$ ).

Unlike the group of boys, this data shows that the groups of girls do not differ so much in their choices of interest.

The gradation of interests in the case of superior girls is as follows: (1) Science, (2) Literature reading, (3) Travel, (4) Sports and (5) Arts.

The gradation of interest in the case of average girls is as follows: (1) Travel, (2) Literature reading, (3) Social Life (4) Science, (5) Sports.

The gradation of both the groups differ significantly.

The fields rated low by superior girls are : Commerce and Pets whereas the fields rated low by average girls are Mechanics and Commerce.

On the whole it is found that the group of superior pupils rated higher in the mean interest in the fourteen specific fields compared to the average group.

But the boys differ significantly while girls do not differ so much.

The difference in sexes show the difference in the choices of interest.

Table : 1 : Distribution of superior adults according to Age-group.

Age Group	No. of superior adults.
25 - 30	2
31 - 35	3
36 - 40	2
41 - 45	5
46 - 50	8
51 - 55	3
56 - 60	2
61 - 65	6
66 - 70	-
71 - 75	1
76 - 80	2
	34

The superior adults selected for the study belong to the different age groups ranging from 25 years to 80 years. Thus all the age groups are equitably taken up for study. The majority of the superior adults belongs to the age groups 41 to 50. and out the 34 adults only 3 adults belong to the age groups 71 to 80 (The list of superior adults ~~along with their birth dates~~ is given in Appendix V ).

Table : 2 : Ancestral Property Possessed by Parents of Superior Adults.

Kind	Superior Adults.
Possessed	21(61.7)
Not-possessed	13(38.3)
	34

On the examination of the above table it seems that 61.7% of superior adults come from families which possessed ancestral property and 38.3% of them do not possess any property. This means that superior adults come in higher percentages from the parents who possessed ancestral property.

Table : 3 : Significant Instances After College Studies.

Kind	No. of Superior Adults.
Visit to	
(1) Foreign countries	19(55.9)
(2) Awards(National)	-
(3) Awards (others)Titles	2(5.9)
(4) Nothing particular	<u>13(38.2)</u>
	34

From the above table it is observed that the superior adults after their studies gained different types of achievements. These achievements are classified as visits

to foreign countries, national awards, other awards or titles.

The percentage distribution shows that 55.9% of superior adults visited foreign countries, 5½9% of them received awards, other than national awards. Hence 61% of them received some type of achievements. This shows that the superior adults are progressive in their professional career too.

Table : 4: Political Preferences of Superior Adults.

Kind	Number of Superior Adults.
Independent	3(8.8)
Socialist	6(17.7)
Liberal(Swatantra)	3(8.8)
Congress	5(14.7)
Undetermined	$\frac{17}{34}$ (50)

On looking to the political preferences of the superior adults, we find that 50% of them are undetermined about their preferences while 17.7% preferred to be in the group of socialists and 14.7% of them preferred to be in Congress. Thus 32.4% of them preferred the prevailing philosophy in the political India. Only 8.8% of them gave their preference to Swatantra party or Independence.

In the Terman's study we find the following political preferences responded by the subjects of the study : Communist, Radical, New deal, Democratic, Republican and Conservative. These catagories of preferences are found absent in our study.

Table : 5 : Publications published by Superior Adults.

Kind.	No.
Yes	15(44.12)
No	19(55.88)

The above table shows that superior adults after completion of their studies went into the difierent fields of vocations and they published either books, journals or a series of articles. The percentage of the superior adults who have published such publications is 44.12. Where as the percentage of superior adults who have not published such publications is 55.88. This shows that more than half of them have not made any remarkable contribution in the field of publications.

Table:6: Age of Marriage of Superior Adults.  
(Incidence of Marriage)

Age group	No. of Superior Adults.
Under 20	12(35.3)
20 - 24	11(32.4)
25 - 29	6(17.7)
30 - 34	3(8.8)
35 - 39	1(2.9)
Not married	<u>1(2.9)</u>
	34

If we look to the above table we find that 35.3% of superior adults married before reaching the age of 20 years and 32.4% of them married before reaching the age of 24 years. Hence 67.7% of them married before the age of 25 years while 17.7% married during the age group 25 years to 29 years. This leads us to conclude that most of the superior adults married before the age of 30 years. Only 14.6% of them married late, after the age of 30 years.

Table: 7(A): Status of partners of superior adults.

Kind.	No.
Alive	31(91.3)
Dead	1(2.9)
No partner	<u>2(5.8)</u>
	34

From the above data we can see that 91.3% of superior adults enjoy the married life while only 2.9% of them do not have this life, while 5.8% of them are yet unmarried.

Table: 7(B) : Status of partners of superior adults.

	No.
Married	29
Divorce or separate	<u>2</u>
	31

As we have seen above, 91.3% of them are married but out of 31 adults, 2 adults are either separate or divorced. and only 29 of them are enjoying married life.

Table : 8 : Number of offsprings to superior adults.

No. of children	No. of superior adults.
Nil	6(17.7)
1	6(17.7)
2	4(11.6)
3	3(8.8)
4	8(23.8)
5	2(5.8)
6	3(8.8)
7	<u>2(5.8)</u>
	34
Average No. of children : 2.8	

On the examination of the above table it is observed that nearly 75% of superior adults have less than five children. 17.7% of them have no child, 17.7% of them have one child, 11.6% have two children, 8.8% have three children and 23.8% have four children. 20.4% of the superior adults have more than five children. The average number of children to the superior adults is 2.8. This shows that most of the superior adults have not more than three children.

Table: 9: Educational status of partners of superior adults.

Kind.	Number
Illiterate	1
Elementary Educated	16
Secondary Educated	6
University Educated	8
	31

As we have seen in table 7(A), that out of 34 adults 31 adults have their partners alive. Hence the distribution here gives the data about those 31 adults. Out of these 31 adults, 16 adults have partners who have received elementary education and 6 have partners who have received secondary education and 8 have partners who have received university education. Hence from this data it seems that most of the

superior adults have partners who are either elementary educated or secondary educated. Very few partners are University educated. Hence it can be concluded that the superior adults do not have the chances of getting equally intelligent partner in the past.

Table : 10: Distinctions obtained by Partners of Superior adults.

Kind.	Number
Awardee	9(26.7)
Non-awardees	25(73.3)

This table shows that only 26.7% of the partners of superior adults have received some type of distinctions and 73.3% of them have not received any kind of distinction. This shows that the awardees are less in percentage compared to the non-awardees.

Table : 11: Future Planning of Partners of Superior adults.

Kind.	Number
Yes	3(8.8)
No	28(91.2)

On looking to the above data, it can be seen that only 8.8% of the partners of superior adults are planning for the

future. While 91.2% of them do not make any further planning. This leads us to conclude that the married life does not give enough scope to the partners of superior adults for future planning.

Table : 12: Health Data of Partners of Superior adults.

Category	Number
Good	19(55.8)
Normal	10(32.2)
Bad	2(12)

The health data is categorized into the three main categories. This table shows the categories alongwith the number of partners in each of them. We find that 55.8% of the partners of superior adults possess good health and 32.2% of them enjoy the normal health conditions. Only 12% of them do not enjoy the good health.

Table: 13: Membership of Superior Adults in Social Institutions.

Kind	Number
Participation	17(50)
No participation	17(50)

This table shows that 50% of superior adults occupy some position in social or educational institutions. While 50% of them do not have the same. The participation in the social institution is not considered to be an aspect of importance for most of the adults.

Table : 14: Effect of Deaths of Relatives on Superior Adults.

Kind	Number
Affected	12(35.2)
Not-affected	22(64.8)
	<u>34</u>

This data shows that 35.2% of superior adults are affected adversely by the deaths of some relatives, while, 64.8% of superior adults do not meet with any such incidence or are not affected.

Table : 15: Distribution of superior adults according to the help rendered to Relatives.

Kind	Number
Rendered help	13(38.2)
Did not render help	21(61.8)

Table No.15 shows that 38.2% of superior adults help their relatives while 61.8% of them do not have the evidence of such help or they do not help at all. This data shows that the percentage of superior adults helping the relatives is much less than those do not render any help.

Table: 16: Age Distribution of superior adults for  
school and college studies.

Age in yea- rs.	Primary: Edu. begins.	Primary: Edu. Ends.	Secondary: Edu. Begins.	Secondary: Edu. Ends.	University: Edu. Begins.	University: Edu. Ends.
4	1 (2.9)					
5	7 (20.6)					
6	8 (23.5)					
7	13 (38.9)					
8	2 (5.8)	2 (5.8)	2 (5.8)			
9	3 (8.3)	3 (8.7)	2 (5.8)			
10		5 (17.7)	4 (11.6)			
11		18 (52.9)	11 (32.3)			
12		5 (14.5)	4 (11.8)			
13		1 (2.9)	1* (2.9)			
14						
15				3 (8.7)	2 (5.8)	
16				10 (29.0)	10 (29.4)	
17				3 (8.7)	6 (17.6)	
18				4 (11.8)	5 (14.7)	1 (2.9)
19				3** (8.7)	2 (5.5)	1 (2.9)
20				-	9 (26.1)	1 (2.9)

contd..

\* 10 adults have not responded.

\*\* 11 adults have not responded

Age in years.	Primary: Edu. begins	Primary: Edu. ends.	Secondary: Edu. begins.	Secondary: Edu. ends.	University: Edu. begins.	University: Edu. ends.
21					2 (5.8)	
22					6 (17.6)	
23					5 (14.7)	
24					5 (14.7)	
25 & Above.					3* (9)	

\* 11 adults have not responded.

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On looking to the table we find that the range of studies start at the age of 4 years and ends at the age of 25 years. This means that the superior adults studied for almost 21 years.

If we look to the stage of primary education, we find that out of 34 superior adults only 8 adults had started their studies before the age of 6 years. While 26 adults had started their studies at the age of six or more than that. In short the school going age for the superior adults was above six years.

The same data is observed in the case of adults leaving primary education shows that out of 34 adults 24 adults went out of the primary schools after the age of 11 years while

only 10 adults were earlier to complete, the primary education.

If the stage of secondary education is looked into, we find that the entry into this stage ranging from 8th year to 19th year. Out of 24 superior adults entered this stage after the age of 10 years. & out of 23, 16 adults completed it at the age of 17 years. Thus the secondary education is of the period of seven years.

On looking to the University stage, we find that out of 34, 22 adults entered this field after the age of 17 years and 21 of them completed it before the age of 25 years. Though 11 of them have completed this stage at the age of 22 years.

Thus this college going age starts from 15 years and ends at the age of 25 years. This means the period of University education for them is a period of 8 years.

Table :17: Future Plan of Superior Adults.

Kind.	No.
Yes	4(11.8)
No	30(88.2)

One of the questions in the questionnaire is as follows :

'Are you planning for future?'

In the answer to this question only 4 adults replied 'yes' and the rest replied 'No'.

This data shows that only 11.8% of superior adults are planning for their future studies or professional equipment. And 88.2% of them are not planning for the future. This shows that the percentage of the adults who are planning is much less than those who are not planning.

Table: 18: Distribution of Superior Adults according to their study-Habits.

Kind	Number
1. Thinking	12(35.3)
2. Thinking & writing	18(52.9)
3. Solving old question papers	3(8.8)
4. All together(above)	1(3.1)
5. Cramming.	Nil.

When the information on the study-habit is to be short<sup>ed</sup> the above five criteria-types are given to them. They are expected to rate each of them.

The ratings have been secured and analysed as shown above.

The data shows that 88.1% of the superior adults followed the first two methods of study while the rest of 11.9%

of superior adults followed the other methods. This means that most of the superior adults followed the method which challenge the intellect and do not follow the method which is mechanical in character.

Table :19: Professional Handicap Due to Illness.

Kind.	No.
Yes	9(29.3)
No	25(70.7)

The superior adults are asked to supply information regarding the illness that they have which hindered their professional progress.

The replies 'Yes' and the replies 'No' are noted and the percentages of these replies are analysed as shown in the table.

The data reveals the fact that 29.3% of the superior adults are hindered in their professional career because of the illness while 70.7% of them are not affected by any illness which hindered their progress. Hence we can conclude that most of the superior adults enjoy the good health for the professional well-being of their individuality.

Table : 20: Superior Adults and their Seasonal Sickness.

Kind	No.
Yes	14(41.2)
No	20(58.8)

This table shows that 41.2% of superior adults suffer the seasonal sickness while 58.8% of them do not suffer such a sickness. This type of sickness may sometimes hinder the professional progress of the individual, but the data reveals the fact that the percentage of sufferers is less than that of the non-sufferers.

Table : 21: Superior Adults and Skin-Diseases.

Diseases	No.
Leucoderma	1(2.8)
Eczema Itch	1(2.8)
<u>With Nil</u>	<u>32(94.4)</u>

The examination of the above table shows that 94.4% of superior adults do not suffer any kind of skin disease only 2.8% of them suffered of Leucoderma & 2.8% of them suffer a disease of Eczema or Itch.

Hence most of the superior adults do not have the hindrance of the skin disease.

Table : 22: General Health of Superior Adults.

Categories	No.
Fair	22(64.7)
Good	12(35.3)
Bad	-

The state of health is considered in the case of superior adults with a view to know the hinderance created by it.

The information is secured through the self rating of the superior adults. The categories that are formed, are shown in the table.

From the observation of the above table it seems that 64.7% of superior adults possess fair state of health while 35.3% of them possess good health. This shows that all of the superior adults enjoy good health.

Table : 23: Professional Status of Superior Adults.

Name of the vocation	No.
1. Doctors	10
2. College teachers	15
3. Engineer	1
4. Chemist	1
5. Pleader	2
6. Retured LL.M.	1
7. Cotton Botanist	1
8. Social worker	1
9. Domestic work.	2

The sample of superior adults is selected from nine vocations. The names of these nine vocations are shown in the table. The data reveals that out of 34 adults 25 adults are selected from the professions of doctors and college teachers while the 9 adults belong to the other seven categories of vocations.

Table : 24 : Vocational choice of Superior Adults.

Kind	No.
1. Self-Directed	31(91.2)
2. Directed by others.	3(8.8)
	<u>34</u>

From the above data it is observed that the vocational choices that are self-directed is 91.2 in percentage while the choices directed by others amount to 8.8% This means that the choices are mostly self-directed and only very few superior adults were directed by others for the selection of the vocation.

Table : 25 : Yearly earned Income of superior Adults.

Income Groups.	No.
1. Low Income Group (Below Rs.6000)	2(5.6)
2. Normal Income Group (Upto Rs.6000)	7(20.5)
3. High Income Group (Above Rs.6000)	25(73.9)

From the above data it is revealed that 73.9% of superior adults belong to high income group and 20.5% of them belong to normal income group while only 5.6% of them belong to the low income group. The average of the incomes is calculated. It is found to be Rs.14000/-. This average also confirms our conclusion that the superior adults belong to high income group.

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