A Comparative Study of the Relationship Between Medical Problems and Academic Attainment of Visually Impaired and Non-Impaired Students

DISSERTATION SUBMITTED TO THE ALIGARH MUSLIM UNIVERSITY, ALIGARH FOR PARTIAL FULFILMENT OF THE DEGREE OF MASTER OF EDUCATION

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Chapter I

INTRODUCTION OF STUDY

Needless to say that people of one species resemble each other in many ways. All human being have a number of common characteristics. They are alike in many respect but not exactly. They are same what different in physical appearance, psychological characteristics, behavioural characteristics and so on. Some of them are normally different but some are different to the great extent and they are different to such an extent that they are labeled as exceptional individual.

Exceptional child is he who deviate from the normal or average children in Mental, Physical and Social characteristics to such an extent that he/she requires modifications of school preclies or special educational services in order to develop the maximum capacity or suplimentary instruction (Kirk) By this definition it is seems that exceptionality means devi- anes, unusualness uncommonness in an individual to such an extent that he or she has to depend some special educational vocational or social treatment to meet his/her needs.

Among all the categories of exceptionality i.e. sens- oily exceptional, (visual and auditory) physically exceitonal,  

Kirk.
mentally exceptional, learning exceptional and Behavioural exceptional etc. The target number is of the visually handi-capped i.e. about nine million.¹

Definition of visually impaired children tend to vary considerably depending on the purpose for which individuals or groups are being described.

Generally visually Impaired are defined as those who differ from normal saying children to such a degree that they need specially trained teachers, specially designed or adopted curricular materials and specially deried educational aids, to achieve them full potential.²

In Warren's Dictionary of psychology's Blindnedeed is defined as a generic team denoting inability to see whether the cause of the abnormality be peripheral, central or intermediate. Butman (1967) defined the Blind and the partially signed in terms of Method they used for learning purposes she says:

Educationally speaking Blind children are these visually handicapped childrend who used Braille and partially seeing children are those who use preint.

Thus definition of visual impairment can be categories in two ways:

1) **Legally blind** are those whose visual acuity is 2/200 or less in the better eye after correction. But partially sighted are those whose visual acuity is between 20/70 and 20/200 in the better eye with correction.

2) **Educationally Blind** are those who need Braille for reading and writing purposes. While partially educationally blind are those who can read print with the help of magnifying glasses or books with the large print.

For educational purposes the definition proposed by American foundation for Blind (1957) is most accepted these days. **Educationally Blind** child in one whose visual laws indicates that child should be educated chiefly through the use of Braille and other tactile and auditory materials.

Visually empaired can be identified through vision screening programmes. Apart from this they can be identified through some eye problems - like having to hold one's head in an awkward position, difficulty in walking in the new place, having to hold material very close to one's eye, inorder to see to much rubbing of eyes, Conlenious request for friends to explain what is going on etc.

In many respect the visually impaired have been favoured group in comparision to the other categories of the handicapped there are evidences that sometimes they have been assigned important roles. Such as guides in the Dark. Memories and Oral transmitters of tribal and religious lors. They were sometime considered as having the power of "Second Sight" in compensation of their lost sight. They have been labeled as a devine resitation also.
But most of the time they have been seen as a punishment of one's own or one's parents sin because the impairment is quite visible and obvious. History reveals that these people have been kept isolated, neglected and exploited because of their especiality and special needs. Because of some misunderstanding they have been the victims of unequal treatment by the communities since long.

Societal attitude toward visually impaned is characterized by over wellming prejudices. People think of them as dangerous which should be removed. They are thought as nuisance. To be drivenont or burdone on the earth.

Because of these stereotypes, Misconceptions and misunderstanding of visually impaired have been categorized as psychologically, Mentally, behaviourally different and different in other areas also. Because of these they have been stignatized by the seeing society as Brown (1958) found that neorotic res­ poses.
Chapter II

REVIEW OF THE RELATED LITERATURE

Brown (1958) found that neurotic responses among blind children were more than the sighted children. Zehran (1965) concluded that many of the blind children were more introverted than sighted. The visually impaired adolescents were found more neurotic than normal seeing children. Bonfemli (1976) conducted study to evaluate verbal and non-verbal traits and behaviours of the two groups of blind adults. The evidence found that non-verbal and verbal traits and behaviours of congenitally blind differs significantly from the verbal and non-verbal traits and behaviours of adventitiously blind and adults. Bharagava and Lavanis 1981 worked on comparative study of personality factors of sensory disabled and normal children having some age and sex. Both of the groups were matched in respect of social economic status and educational level. Srivastava's Socio-economic status scale was used to measure the Socio-economic status while Kapoor and Rao's children's personality questionnaire was employed for assessing personality characteristics. The results showed that sensory disabled, were more reserved, emotionally unstable obident, shy dependents sentimental, secure and released their counterparts, the normal children.

Nisar and Khan (1982) aimed at finding out goal or aspiration level among the visually handicapped boys. The sample consisted of 42 school going 11 - 16 years old boys (classes IV- VIII). Ansari's list of level of aspirations employed for this purpose. The investigation revealed that usually handicapped boys set goal or aspiration level so low as to warrant their characterization as cautious, insecure, failure avoiding etc. Khan (1985) attempted to compare the educational aspiration and occupational expectation of blind and normal children. It was found that the educational aspiration of blind were lower which may be attributed to the blindness and non availability of the facilities for blind. Occupational expectation for blind were highly related to the type of training they receive in school. But Lowenfeld (1955) asserted that in the matters of personality and social factors there were no fundamental differences between blind and sighted.

Sommars (1944) found that personal and social adjustment of blind adolescents as a group was below than that of sighted and blind girls were slightly better than that of blind boys. Hubbard (1945) indicated that sighted subjects were better adjusted as compared to blind subjects. Harley (1963) after investigating the relationship between verbalism and adjustment of blind children concluded that both of these factors are related with each other. Fraiberg (1978) found

Nisar and Khan (1982)
that blind infants are delayed in comparison of sighted children in their manifestation of attachment behaviour. Sharma (1977) studied that adjustment problem of sensory disabled. The investigation found that blind deaf and dumb all were emotionally maladjusted. Qadar (1982) attempted to investigated certain social and psychological factors among blind and normal students. The sample consisted of 20 blind (experimental group) and 25 students (control group) studying in classes VII to IX of Ahmadi school for the blind, Aligarh and S.T. High School, Aligarh respectively. Ishtiaque's interview schedules were used are self assessment and other for teacher assessment of the students covering some important social and psychological areas like home atmosphere, interest like and dislikes. \( \chi^2 \) was applied to know the difference. The study showed that most of the blind came from psychologically broken homes, and suffered from emotional maladjustment. Majority of them had no interest for curricular and co-curricular activities. They differed significantly from normal with respect to all following factors.

1. Attitude of parents towards subjects
2. Quarrel among parents
3. Liking towards homes
4. Feeling towards school and other places
5. Interest in the study

Kaur, Singh and Jain (1984) attempted to investigate the emotional adjustment of normal and blind adolescents.
The results revealed that there exists a significant difference between emotional adjustment of normal and blind adolescents. While Cowen et al. (1958) found that there were no significant differences in adjustment among home living visually handicapped adolescents and those attending residential school and sighted students on a number of adjustment measures. Sarita (1985) conducted a comparative study of adjustment pattern of visually handicapped and sighted children on 80 children out of which 40 visually handicapped and 40 sighted children and found that overall adjustment emotional, social and educational of visually handicapped was poor than sighted students. Sublok (1976) observed that blind had overall satisfactory adjustment in all the life situations but they were suffering from feeling of inferiority. Gupta (1982) made a comparative study of various adjustment problems (family social and emotional) of three types of physically handicapped i.e. deaf, dumb, blind and crippled, ageing from 14-25 years. No significant difference was found among all the three groups an adjustment pattern. Kaur Singh and Jain (1984) attempted to study social adjustment of normal and blind adolescents. The sample consisted of 80 normal adolescents compared with 40 blind adolescents from age group of 11-13 and 14-16 years. Junior personality inventory in Hindi formulated by Mohan et al. (1968) and a personal information sheet developed by the investigator was employed as measuring tools. The results indicated that there is no significant different between
social adjustment of normal and blind adolescents.

Hayes 1941 was the first who worked in the area of intelligence of blind. Bateman (1967) Lowenfeld (1945) Nolan and Ashecaft (1963) found that both partially sighted and blind children were behind their sighted peers when equited on mental age. Hivingston (1968) administered standford Binet test to 60 children ageing 8-9 years in the classes of partially sighted the result revealed that their average I.Q was 98.6 but they performed like normal children on reasoning, Language development and abstract generalization. But Birch et al. 1966 was also attempted to study the school achievement of 93 partially sighted children in the 5th and 6th grade, found that although the children were of average intelligence they were average for grade and 2.1/2 years retarded in academic achievement.

Singer and Streiner (1966) attempted to compare the richness and complexity of content of emagination production for matched group 20 blind and 20 sighted students. Finding showed that (1) sighted children are higher for emagnativeness of play, spontaneous fantasy and dreams. (b) Blind children showed greater concreteness and lack of flexibility and associational variety. Anderson (1984) examined the effect of absense of vision on 10 totally and congenitally blind childrens (aged 3-9) years. Sighted children were asked to describe firsrt from memory and than through tectual exploration selected common objects. The blind children
mentioned significantly more egocentric attributes than the sighted subjects during the verbal task. They also tested more functional attributes, but these differences were not significant. The sighted subjects mentioned significantly more perceptual attributes than the blind subject on the tactile task.

Gollam 1971 found no difference sighted and blind children when he compared haptic perception of objects that is using though the determine the shape by blind children (2-8 years) with a comparable groups of sighted children.

**Languages Development:**

Custforth (1961) tested congenitally blind children with a free association test. The subject responded with words that were unrealized to them. These verbal responses were in terms of learned, associatives visual response rather than children's own tactile hearing experiences. Kayler (1983) studied the use of language of blind children in comparison to sighted children. The results revealed that the blind children were less responsive, more spontaneous more imaginative, used more verbalization and more total words than sighted children. Anderson I Kekelis (1984) concluded their study on 6 children (9 month - 3.4 years) with varying degree of visual impairment. The result revealed that blind had difficulties in those area of language acquisition where visual information provided input about the words. Thus it is concluded that visual input is major stimulus for process
under-lying acquisition in lexical and pragmatic aspect of language. Van et al. (1985) evolved level of social functioning in 52 visually handicapped male children 13-19 years old out of which 18 visually handicapped from residential school 17 from public school and 18 sighted from public school. Result indicates that visual handicap deficit in selected verbal components of social skill. Moreover deficiencies in speech duration speech disturbance and non verbal components were most apparent in visually handicapped children from residential setting. Schlaegal (1953) found no difference between blind and sighted in respect to oral word or phrase. Bateman (1965) studied 93 partially sighted children. The investigator concluded that partially seeing children were relatively in impaired in terms of language functioning. Rowland (1984) studied preverbal communication of blind infants and their mothers. Analysed films of interactions which were made at a regular intervals over a 6 month period between 6 months and their blind infants (aged 11 month - 2 years 8 month). Findings revealed that infants do not seriously delay in communication development but mothers response are weak and unconsistant and early exchange between mother and infant proved a starting point for prevention and intervantion. Dring (1984) conducted a study on word recognition process of blind and sighted children. The investigator carried out 2 word/non word decision experiments with 9 congenitally blind children (mean age 12 years 2 month) and sighted mean age (10 years 6 months). Result show that sighted
children show an increased semantic facilitation effect with degraded when compared with ungraded automatic processing component in word recognition and stimulus quality was studied. Result show that the magnitude of word frequency effect was uneffected by script legibility in either group.

Welson and Halverson (1947) observed that the general development of the blind was retarded which was more pronounced in motor areas. Cratly (1971) has studied aspects of motor response of blind children and found that laterality is well developed in the congenitally blind as in the adventitiously blind (those who have sight before becoming blind) congenitally blind give evidence of lack of right till while walking in the absence of auditory cues. The investigator found that training can be effective in overcoming this tendency and suggest that planned stimulation is necessary for the proper development of the motor skills in the blind children. Mac Gowan and Evelyn (1983) studied 9 sighted and 9 congenitally blind children ageing upto 6-10 years subjects were studied for 35 kinematic parameters. Finding showed that congenitally blind children took shorter step then sighted children and walked more slowly. They also spend more time in support particularly in double support phase. Bordie (1957) found a high relationship between opportunity for learning mobility of blind children and their motor performance. Schmit (1978) tested experimentally the complexity in 2 near space task assuring the novelty of all stimuli
for tactual pattern discrimination and tactual path leaning. Investigator also studied the effect of visual and perceptio

nal behaviour during the development accompanied blindness. The finding showed tactual path discrimination performance and tactual path learning were predictable by degree of percep
tual motor experience.

Imamura (1965) found dependent behaviour on the part of pre-schooler during their interaction with their mother who have excessive pity feeling for them. Workman (1980) attempted to find out relationship of teacher's verbalism and social interaction of blind children in early integrated school setting. The investigator found that role of teacher's verbalism facilitates in social interaction between blinds and their peers. It was suggested that teachers through their verbalism specially by their description of social environments prompt the target child (blind) and thus have a direct effect. It also indirectly effects the peers of the target child.

Drigger (1982) investigated the relationship between inappropriate behaviour of blind and low vision children and their social acceptance by their sighted peers in regular classroom. The finding showed that blind and low vision children were less accepted by sighted peers. In fact they were either ignored or isolated in classroom. Worth (1984) consider the impact of infants blindness on mother infant bonding. These mothers may experience difficulty in a teaching themselves to their blind infant because of fear, hurt pride, rejection or un

conscious desired for the infants death. Many of these mothers
find their infants irresponsible. Blindness, thus is a communication barrier between mother and child that places extraordinary demands on the adaptive capacities of both of them. The mother can learn how to respond to the infants remaining modalities and develop a reciprocal cueing system that emphasizes auditory and manual cues and tactual intimacy. Such a reciprocal system will enhance the child's development component communication between infant and mother is required of the child is to relate within a sighted world.

Birch J.W. et al. 1966 after surveying 903 partially sighted children of Vth and VIth grade, concluded that they were low grades blow their expected achievement. Presen size use did not make any difference. Lowenfeld (1967) studied Blind Mastery of pains scripts that found them equal to sighted in reading comprehension - Telford and Sawrey (1977) after many studies concluded that when seeing and blind children are compared grade by grade, the two group about equal excepted in arithmetic, in which the scores of the blind are generally lower. The investigations further concluded that comparison by either chronologically or mental age indicate considerable educational relation.

The review of the related literature reveals that visually impaired are psychologically and some what different from their normal counterpart. They wrong and undesirable behaviour and treatment of seeing society for visually impaired population teads the later towards a number of the physical as well as psychological problems (such as diseases related
with eyes, ears, cardiovascular system, nervous system, inadequacy, depression, anxiety, anger, tension etc.) followed by negative effects on their attainment in the field of education.

Most of the research studies in preceding pages reveals that they do not lag behind the normal children in educational achievement. Due to the lack of intelligence or other factors, rather some other factors may be responsible for low achievement.

School achievement is affected by a number of factors such as personality, physique, socio-economic status, study habits and cognitive ability and physical and mental problems and so on and so forth.

Apart from this personal and special problems the visually handicapped children have also cognitive problems due to the lack of vision experiences. They have limited capacity to perceive objects. They have to wait for contact, sound or smell to arouse their curiosity and by this it is the well-known fact that these limitations rebounded their cognitive abilities. These shortcomings create problems in educational achievement and therefore they are not very well adjusted in the present education system. They need special types of aids, devices and teaching methods to utilize their potentialities.

In our country the status of education for visually
handicapped is not satisfactory. Though the Education Commission (1966) has very much emphasised on the education of handicapped children. Moreover, the New Education Policy of 1986 has very rightly said that there should be equality among all citizens of India as far as education is concerned. It has a slogan too, "Education for all by 1990". But this slogan cannot be fulfilled until the government do not practically whatever is said theoretically. Since V.I. have some specific needs in every field so naturally they need some different type of whole educational programme which is quite expensive too. But for bringing them in mainstream of the society, we will have to make efforts in this regards.

The position of research work in India in the field of V.I. is anemic. It is the most neglected area of operation at present. There is lack of awareness, directions and sincerity towards research in this particular area. It requires strengthening considerably if education of V.I. is to be made an effective preposition. Efforts should be made to study the educational programmes of V.I., factors affecting their education, improvement of the same and so on.

Review of previous researches in preceding paragraphs revised that no such attempts have been made so far to study the effect of medical problems (physical and psychological) on academic attainments of visually impaired. Attempts have
also not been made to compare the relationship between the above mentioned variables of seeing children with V.I. children. Therefore, the present study aims at finding out the relationship between the above mentioned variables of V.I. and its comparison with normal seeming children.

OBJECTIVES OF THE STUDY

The objectives of present study are as follows:

(1) To find out the significance of correlation between physical problems and academic attainment of visually impaired students, in different school subjects separately.

(2) To find out the significance of correlation between psychological problems and academic attainment of visually impaired in different subjects separately.

(3) To determine the coefficient of correlation between physical problems and academic attainment of normal seeing children in different school subjects.

(4) To know the relationship between psychological problems and academic attainment of normal seeing children in different subjects separately.

(5) To calculate the coefficient of correlation between medical problems (total) and academic attainment (total) of V.I. school children.

(6) To calculate the coefficient of correlation between medical problem (total) and academic attainment (total) of normal seeing children.
STATEMENT OF THE PROBLEM

A comparative study of the relationship between medical problems and academic attainment of visually impaired and normal seeing students.

HYPOTHESES

(1) There exists a significant and negative correlation between physical problems and school attainment of visually impaired students.

(2) There exists a significant and negative correlation between psychological problems and school attainment of visually impaired students.

(3) A significant correlation is observed to exist between physical and psychological problems and school achievements of normal seeing students.

(4) There exists a significant and negative correlation between medical problems (physical and psychological) and total academic attainment of visually impaired students.

(5) There exists a significant and negative correlation between medical problems (physical and psychological) and academic attainment of normal seeing students.

(6) The significant difference exists between the correlation values of medical problems and academic attainment of visually impaired and normal seeing (sighted) students.

PROCEDURE IN OUTLINE

The Cornell Medical Index standardized by Singh (1986) was administered through the interview technique to visually impaired and normal seeing 50 male students studying in class VI to XI at Aligarh district. The investigator consulted the school records for academic attainment in four subjects, i.e., Urdu, English, Science and Maths.
**DELIMITATIONS**

The present investigation has some delimitations such as:

1. The research work is confined to students studying schools only.

2. The study could not be conducted on male students only because of the paucity of time.

3. Academic attainment is affected by a number of factors such as personal factors, cognitive factor, socio-economic status, facilities provide for education and so on, but in the present investigation the researcher was not in the position to study all these factors because of paucity of time.

4. Sample of present research work consists of only 50 students (25-25) because of less number of visually impaired.

5. Data could be analysed only with the person's product moment coefficient of correlation method, and Fisherman's Z value and T value of correlation.

6. The sample of present research work is confined only to two schools of Aligarh, i.e., Ahmadi School for Blind and City High School, AMU, Aligarh.

7. The sample is confined to only Aligarh City.
Chapter III
DESIGN AND PROCEDURE OF STUDY

The present study aims at finding out the correlations between the medical problems and academic attainment of visually impaired as well as normal seeing students studying in high schools. The study also purports to compare both the correlations and find out the significance of the difference between the two correlations. There was a need for testing the medical problem of visually impaired and normal seeing and its impact on their academic attainment. The Cornell Medical Index (Mate form) standardized by Singh 1986 and examination marks of students in different subjects were employed to serve this purpose. The details of the both of the measuring tools are as follows:

Cornell Medical Index - C.M.I. was originally designed by Brodman et al (1949) as an auxiliary method of comparative inquiry about client's general health. On the basis of pilot study of 1,000 students, most frequently reported 195 items were finalized for inclusion in this questionnaire.

Out of these 144 items constitute the physical section and remaining items were grouped under the psychological section, said to be useful in inquiring into the psychological state of respondent. In the two forms of C.M.I. for males
and females all the items are identical except for sex questions in the genitourinary system.

Efficiency of this questionnaire has been reported by authors (Brodman et al., 1949). In identifying the presence of anxiety state of hypochondriasis, convulsive disorder, migraine, asthma, peptic ulcers and borderline syndromes.

Further it has been suggested that it will be misleading to use C.M.I as substitute of inventories like the Burnrecenter, the Minnesota and other such scales. As all these provide separate scoring and norm for specific personality traits or disorders whereas scores for the entire questionnaire of C.M.I. assists only in distinguishing between those having serious personality difficulties, physical and psychological problems and those not having them.

Cornell Medical Index (Hindi Questionnaire) - Hindi version of C.M.I. was translated and standardized by Wig, Pershad and Verma (1983) in a medical research institute (Psychiatry Department, P.G.I., Chandigarh). Their emphasis in Hindi translation of C.M.I. was to make it simple (Wig et al., 1974) in Hindi language so that it can be made available to the assessment of large number of illiterate population.

Scores on translated version of C.M.I. correlated highly ranging between .77 - .87 (ranging between .77-.87) with the scores obtained on original English form (N = 24 Nursery
students to whom this questionnaire was administered in ABBA order.

It was observed that Indian psychiatric patients reported more complaints of exhaustion, fatigue, general ill-health, anxiety, phobia, depression and irregularity on C.M.I. items, whereas western data suggests that their patients admit previous psychiatric episode in the family which is reported more frequently on C.M.I.

The constructor of the test (Singh, 1986) administered it on the sample of 281 subjects (166 males and 115 females) who came from different institutions for the visually handicapped of northern India.

Subjects who were blind by birth or became blind up to the age of 4 years were identified as congenital group.

Subjects who became blind in later years of life were identified as adventitiously blind group.

A subject was defined as rural for inclusion in this group who was brought up in a rural setting and was staying in the rural set up before joining the institution (where he was studying for undergoing treatment). Those subjects were included in the urban group who came from an urban locality and were the inhabitants of a town or city before joining the training or educational programme in an institutional set up.
The test was found highly reliable and valid.

**ADMINISTRATION AND SCORING**

Hindi version of C.M.I. by Singh (1986) is unambiguous and self explanatory in nature can be used in any form of administration. Each 'yes' responded item is scored as one (01) score.

Obtained scores are presented in terms of physical distress, psychological destress, and total distress scores.

Distress signifies as unpleasant emotional experience to environmental influence or due to change in some external environment or as reaction to some disease or disability.

**School Attainment** - A composite of examination marks in different subjects, i.e., Urdu, English, Science, Maths., obtained by visually empaired and normal seeing students of different classes were taken from the school records. The marks were converted into percentage to avoid the biase in results.

**SAMPLE** -

The sample of study consists of 50 male students only (25 visually empaired and 25 normal seeing students) belonging from Ahamadi School for the Blind, Aligarh, and City High High School, Aligarh Muslim University, Aligarh, which is clear from the following table.
In the present investigation large number could not be taken because of lesser number of visually impaired students as they belong to the smaller part of the whole population or smaller number of subjects in the special educational programme. Singh's subject research work is well accepted because of the uniqueness of disability of the child (Tawney, 1984).

**Procedure of Collecting the Data**

The Cornell Medical Index was administered first to nonsighted students. The C.M.I. was not available in Braille script so the help of interview technique was sought for administering the questionnaire.

The investigator read out the questions one by one. The students were instructed to note down the answers into Braille script. After completing the whole question-answer procedure, the researcher could able to transfer these answers into normal script by the help of a Braille reader. The questionnaire was administered to visually impaired into groups.

<table>
<thead>
<tr>
<th>Name of the School</th>
<th>No. of students</th>
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<td>Ahmadi School for the Blind, Aligarh</td>
<td>... 25</td>
</tr>
<tr>
<td>City High School, A.M.U., Aligarh.</td>
<td>... 25</td>
</tr>
<tr>
<td>TOTAL</td>
<td>... 50</td>
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</table>
The same procedure was employed for collecting the data from normal seeing students, to point out the effects of technique or to remove the bias from the results.

After the administration of the test, the researcher scored the answer sheets, filled by the students and culminated some of the answer sheets which were not filled in the proper manner. The investigator consulted the schools' authorities to know the examination marks of the students in different subjects.

Statistical Treatment

First of all, all the raw scores of the first test were changed into percentage and then achievement of the same student in different subjects (Urdu, English, Science, Maths) were changed into percentages. By the help of mean and S.D. of both tests, Pearson's Product Moment coefficient of correlation was employed to find out the correlation between the two variables. Values of the correlation coefficient required for the different levels of significance were calculated. Apart from this, Fisherman's "Z" test was applied to know the significance of difference between the correlations.
Chapter IV

ANALYSIS & RESULTS

The present research work aims at finding out the relationship between Medical Problems (Physical and Psychological) and academic attainments of visually impaired and normal seeing students. The study also purports to find out the significance of difference between the above correlation (between medical problem ed and academic attainments of both type of the students. The academic attainments of students are affected by a number of factors (Spielberger, 1966, Abbas, 1987).

Product Moment coefficient of correlation and Fisherman's "Z" test were employed to analyse the data of study. Apart from this value of correlations requires a different level of significance were also calculated (Minicem, 1978).

Table 3.1: The coefficient of Correlation between Physical problems and attainment in Urdu of visually impaired.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Significance</th>
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<td>Physical Problem</td>
<td>25</td>
<td>41.40</td>
<td>10.22</td>
<td>-.71</td>
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<tr>
<td>Urdu</td>
<td>25</td>
<td>35.00</td>
<td>14.15</td>
<td>.01</td>
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The table reveals that the mean of physical problems and attainment in Urdu are 41.40 and 35.00 respectively. The correlation between these two variables is -.71, which is
significant at .01 level of confidence. The value of correlation shows that physical problems are negatively related with academic attainment, i.e., higher the physical problems, lower the academic attainment.

Table 3.2: Coefficient of correlation between physical problems and attainment in English of visually impaired.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
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<tr>
<td>Physical Problem</td>
<td>41.40</td>
<td>10.20</td>
<td>-.85</td>
<td>.01</td>
</tr>
<tr>
<td>English</td>
<td>39.48</td>
<td>15.47</td>
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</table>

The table depicts that the value of correlation between physical problems and English achievement, obtained by visually impaired is -.85 with the means 41.40 and 39.40 of physical problems and attainment in English respectively. The correlation value shows that there exists a very high correlation but negative, between the two variables because the correlation value is significant at .01 level of confidence. It makes clear that the achievement in English of visually impaired is highly affected by physical problems of students.

The following table reveals that the mean value of physical problems and achievement in Science are 41.40 and 34.58 respectively. The correlation between these two is -.75 which is significant at .01 level of confidence.
Table 3.3: The Coefficient of correlation between physical problems and attainment in Science of V.I.

<table>
<thead>
<tr>
<th>Physical Problem</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>25</td>
<td>41.40</td>
<td>10.22</td>
<td>-.75</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>34.58</td>
<td>14.78</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.4: The coefficient of correlation between physical problems and attainment in Mathematics of V.I.

<table>
<thead>
<tr>
<th>Physical Problem</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maths.</td>
<td>25</td>
<td>41.40</td>
<td>10.22</td>
<td>-.70</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>30.16</td>
<td>15.81</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.4 depicts the high negative correlation between physical problems and high negative correlation between physical problems and achievement scores in Maths of visually impaired as the value of correlation is significant at .01 level of confidence.

It was hypothesized that there exists a significant and negative correlation between physical problems and school achievement of visually impaired students. All the above mentioned tables make it clear that achievement scores in Urdu, English, Science and Maths have a negative effect of physical problems of V.I. students. Thus the hypothesis that
there exists a significant negative correlation between physical problems and academic achievement in different subjects of visually impaired students is accepted on the basis of obtained coefficient of correlation.

The review of previous researcher revealed that no such attempt has been made so far to find out the effects of physical problems on academic attainment of visually impaired.

The Relationship between Physical Problems and Academic attainment of sighted students:

Table 3.5: Coefficient of Correlation between Physical problems and achieved scores in Urdu of sighted students.

<table>
<thead>
<tr>
<th>Physical Problem</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urdu</td>
<td>25</td>
<td>53.64</td>
<td>.57</td>
<td>.01</td>
</tr>
</tbody>
</table>

The above table shows that normal seeing children have mean scores of 22.08 in physical problems and 53.64 in attainment in Urdu. The coefficient of correlation between these two variables have been found -.51 which is significant at .01 level of confidence. This quite also makes clear that achievement in Urdu has a negative effect of physical problems of students.

Table 3.6 depicts that achievement in English is related with the physical problems of students as the value of
Coefficient of correlation is -.49 signified at .05 level of confidence. The value has not been found significant at .01 level.

Table 3.6: Coefficient of correlation between physical problems and attainment in English of sighted students.

<table>
<thead>
<tr>
<th>Physical Problem</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>25</td>
<td>22.08</td>
<td>11.73</td>
<td>-.49</td>
</tr>
</tbody>
</table>

Table 3.7: The coefficient of correlation between physical problem and Science of normal seeing students.

<table>
<thead>
<tr>
<th>Physical Problem</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Science</td>
<td>25</td>
<td>47.73</td>
<td>10.75</td>
<td>-.48</td>
</tr>
</tbody>
</table>

Table 3.7 shows that science achievement of normal seeing children is negatively affected by a number of physical problems. The table shows that the correlation between these two variables is -.48 which is not significant at .01 level but significant at .05 level of confidence.

Achievement in Maths is significantly and negatively correlated with the physical problems as the value shown in
The table depicts that visually impaired have got the mean scores of 29.36 of psychological problems while 35.00 on achievement in Urdu. The value of correlation, i.e., -.67, makes it clear that both these variables are negatively correlated with each other. It means that except the physical problems, psychological problems also impose a great impact on academic achievement. The value finds significant nonly only at .05 level but at .01 level too.

Table 3.10: The impact of psychological problems on the achievement scores in English of visually impaired students.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy. Problems</td>
<td>25</td>
<td>29.36</td>
<td>9.11</td>
<td>-.77</td>
</tr>
<tr>
<td>English</td>
<td>25</td>
<td>39.40</td>
<td>15.47</td>
<td></td>
</tr>
</tbody>
</table>

Table 3.10 makes clear that coefficient of correlation between psychological problems and academic attainment in English is -.77 which is highly significant at point .01 level of confidence.

Table 3.11: The effect of psychological problems on the achievement scores in Science of visually impaired students.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy. Problems</td>
<td>25</td>
<td>29.36</td>
<td>9.11</td>
<td>-.74</td>
</tr>
<tr>
<td>Science</td>
<td>25</td>
<td>34.52</td>
<td>14.78</td>
<td></td>
</tr>
</tbody>
</table>

The value of r has been found -.74 (significant at .01 level) with the mean scores 29.36 and 34.52, respectively in
the table No. 3.8 is -.41 which has been found significant at .05 level of confidence. It means higher number of physical problems lead the child lower the achievement.

Table 3.8 : Coefficient of correlation between Physical Problem and Achievement in Maths of normal seeing students.

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical problem</td>
<td>25</td>
<td>22.08</td>
<td>11.73</td>
</tr>
<tr>
<td>Maths</td>
<td>25</td>
<td>45.60</td>
<td>10.83</td>
</tr>
</tbody>
</table>

The hypothesis No.3 is that there exists a significant and negative correlation between the physical problems and achievement of normal seeing children is approved. Physical problems have the great impact on the academic achievement with both the sighted and non-sighted students. These compell the child to achieve low.'

Relationship between psychological problems and academic achievements in different subjects of visually impaired students :-

Table 3.9 : The relationship between physiological problems and achievement in Urdu of visually empaired students.

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical problem</td>
<td>25</td>
<td>29.36</td>
<td>9.11</td>
</tr>
<tr>
<td>Urdu</td>
<td>25</td>
<td>35.00</td>
<td>14.15</td>
</tr>
</tbody>
</table>
the psychological problems and achievement scores in science. The value of correlation obviously indicates that psychological problems have the capacity to compel the child to achieve lower.

Table 3.12: The effect of psychological problems on the academic achievement in Maths of visually impaired.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy.Problems</td>
<td>25</td>
<td>29.36</td>
<td>-9.11</td>
<td>0.74</td>
</tr>
<tr>
<td>Maths</td>
<td>25</td>
<td>34.52</td>
<td>14.73</td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the above table that achievement in Maths of visually impaired is very much negatively related with their mental and emotional problems. The value of $r = -0.87$ is highly significant at 0.01 level of confidence also.

It was hypothesized that there exists a significant and negative correlation between psychological problems and school achievement of visually impaired students. All the above mentioned tables make clear that achievement scores in Urdu, English, Science and Maths have a negative effect of psychological problems of visually impaired students. Thus this hypothesis is accepted on the basis of obtained scores rightly.
The relationship between psychological problems and academic attainment of sighted students.

It is hypothesized that there exists a significance and negative correlation between psychological problems and academic attainment in different subjects (Urdu, English, Science, Maths).

Table 3.13 - The effect of psychological problems on the achievement score in Urdu of normal seeing students.

<table>
<thead>
<tr>
<th>Psy.Problem</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urdu</td>
<td>25.8</td>
<td>43.60</td>
<td>14.91</td>
<td>-.64</td>
</tr>
</tbody>
</table>

Since the value of $r$ has been found -.64 between the psychological problems and academic attainment in Urdu. It can be said with authenticity that both the variables are highly and negatively correlated with each other.

$r = -.64$, significant at .01 level of confidence.

Table 3.14 : The relationship between psychological problems and achievement in English of sighted students.

<table>
<thead>
<tr>
<th>Psy.Problems</th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>25</td>
<td>48.88</td>
<td>14.97</td>
<td>-.63</td>
</tr>
</tbody>
</table>

The coefficient of correlation between psychological problems and academic achievement in English subject to normally seeing students has been found -.63 which is significant at .01.
level of confidence.

Table 3.15: The impact of psychological problems in relation to the academic achievement in Science of normal seeing school students.

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy. Problems</td>
<td>25</td>
<td>43.60</td>
<td>14.97</td>
</tr>
<tr>
<td>Science</td>
<td>25.</td>
<td>47.72</td>
<td>10.75</td>
</tr>
</tbody>
</table>

Normal seeing children achievement in Science mean scores of 43.60 and 47.72 of psychological problems and academic achievement in Science respectively. The negative correlation between these two is quite high (-.71). This value is quite significant at .01 level of confidence.

Table 3.16: The correlation between psychological problems and academic achievement in Maths of sighted students.

<table>
<thead>
<tr>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy. Problems</td>
<td>25</td>
<td>43.60</td>
<td>14.97</td>
</tr>
<tr>
<td>Maths</td>
<td>25.</td>
<td>45.60</td>
<td>10.83</td>
</tr>
</tbody>
</table>

The above table also depicts the negative and high correlation between psychological problems and achievement scores in Maths, of normal seeing students as this value is significant at .01 level of confidence.

Thus the hypothesis that there is the significant impact of psychological problems on academic achievement in four
School subjects of visually impaired as well as sighted students has been accepted obviously.

The review of related literature reveals that there seems to be no such attempt made so far to investigate into the psychological problems and academic attainment of visually impaired and normal seeing students.

The Relationship Between Medical Problems (Total) and Academic Achievement (Total)

After analysing the data of physical and psychological problems and academic achievement in different subjects separately, an attempt was made to find out the relationship between total medical problems and total academic attainments of visually impaired samples.

It was hypothesised that a significant correlation is observed to exist between Medical problems (physical and psychological) and total academic attainment of visually impaired students.

Table 3.17: Significance of correlation between Medical problems and academic attainment - total of V.I.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>S.D.</th>
<th>r</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total M.P.</td>
<td>25</td>
<td>70.76</td>
<td>11.48</td>
<td>-.91</td>
</tr>
<tr>
<td>Total Acad.</td>
<td>25</td>
<td>139.16</td>
<td>54.54</td>
<td></td>
</tr>
</tbody>
</table>

It is clear from the above table that visually impaired have mean score of 70.76 on Medical problems (total) and
mean scores of 139.16 on total academic achievement. The relationship between these two factors has been found -.91 which is highly significant at .01 level indicating that achievement in all subjects or activities has a negative impact of medical problems of students.

The Correlation between Medical Problems and Attainments scores of sighted students.

It was hypothesised that there exists a significant and negative correlation between Medical problems and academic achievement of normal seeing students.

Table 3.18 : The impact of Medical Problems on academic achievement of normal seeing students.

<table>
<thead>
<tr>
<th>Total M.P.</th>
<th>Total Acad. Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>S.D.</td>
</tr>
<tr>
<td>25</td>
<td>43.60</td>
</tr>
<tr>
<td>25</td>
<td>195.80</td>
</tr>
</tbody>
</table>

Table 3.18 makes clear that the relationship between Medical problems (total) and academic attainment (total) of normal seeing students is significant at .01 level of confidence because the value is -.72 which is quite less than the relationship between the same factors of visually impaired (-.91).
Significance of Difference Between these two correlation.

It was hypothesised that there exists the significant difference between the two correlation values of Medical problems and academic attainment of visually impaired and normal seeing students.

The Significance of Difference

When all the results were clear, i.e., both the variables are negatively, significantly related, the investigator became curious to know whether the difference between these two variables is significant or not. Fisherman's "Z" test (Minimum 1978) was employed to serve this purpose. The result showed that difference between these two correlations is highly significant at the value is 5.41 while the standard value is 2.58.
Chapter IV

FINDING AND CONCLUSION

(1) Coefficient of Correction physical problems and attainment in different subjects of visually impaired:

It was found that the correlation between physical problems and academic attainment of visually impaired in Urdu, English, Science and Mathematics are -.71, -.85, -.75 and -.70 respectively, which are significant at .01 level of confidence.

The significance of relationship shows that physical problems have a denying effect on the school achievement of the children. Therefore, it is concluded that physical plays an important role in lowering the academic performance of visually impaired students.

(2) Coefficient of correlation between physical problems and academic attainments in different subjects of normal seeing students:

The table numbers 3.5 to 3.8 reveal that all the negative correlations between physical problems and academic attainments in Urdu, English, Science and Maths., of sighted students are significant at .01, .05, .05, .05 level of confidence respectively.

The values give a ground for inferring that physical
40

problems have not a good effect on the school performance of normal seeing children. So it can be concluded that physical problems hamper the progress of academic performance of the child in school.

(3) Correlation between Psychological problems and achievement scores in different subjects of visually impaired students:-

The value of correlation between psychological problems and school performance of visually impaired students (-.67, -.77, -.74 and -.87) in four subjects separately are not due to the chance error rather there is real relationship between the above mentioned two variables.

Since the values of correlations are in minus signs so it is very clear that psychological problems are considered as hurdles as far as academic performance of visually impaired is concerned.

(4) The relationship between psychological problems and academic attainment of sighted students in different subjects:-

Similar to visually impaired, normal seeing children have also been found as having the negative effect of mental and emotional problems on their school tasks in four subjects which is obvious from the results (-.64, -.63, -.71, -.67 respectively). It is also concluded that these problems play quite prominent role (though negative) in school activities of normal seeing children.
(5) The effect of total Medical problems on the total academic attainment of V.I. students:

The coefficient of correlations between medical problems (total) and academic performance (total) of visually impaired students was found -.91. This result leads the investigator to conclude that medical problems separately (i.e., physical as well as psychological) or in combined form effect the academic attainment negatively.

(6) The impact of total medical problems on total academic attainment of normal seeing students:

The coefficient of correlation between medical problems (total) and academic attainment (total) of sighted students was found -.71. This result makes clear that like the visually impaired students, the sighted students also have the effect of medical problems.

(7) Significance of difference:

Since the investigator was inquisitive to know whether the correlations between medical problems and academic attainment of visually impaired and normal seeing children were significantly different or not, the Fisherman's "Z" test showed that the difference between these two correlations is quite significant (5.41) to compell the investigator to conclude that visually impaired students' academic attainment is effected by these medical problems more than their counterparts.
**SUGGESTIONS**

Effect of physical problems on academic attainment of visually impaired is quite significant. This shows that visually impaired are having vary physical problems which need removal. The efforts should be made by parents, teachers, as well as society members to prevent the visually impaired from physical diseases. Many of these physical diseases may be psychosomatic. They may have these diseases because of the unequal treatment by the seeing society because the society considers them as most useless and discarded individual so this type of attitude requires some changes.

Physical problems also affect the academic tasks of seeing children like their visually impaired counterparts. But not to that extent to which later have the effect though they have lesser number of physical problems that visually impaired but they cannot labled as not having physical problems. They should also be medically checked up previously, and periodically. Negligence of parents and school authorities toward the health leads them to physically unfit of unhealthy.

As far as psychological problems of visually impaired are concerned, it is seen because of the talk of vision sense, blinds have been categorised as psychologically different. Society from the very beginning has feared and misunderstood these persons. It cannot be denied that they have some specific mental and psychological characteristics,
but this is not because of the deprivation of vision sense rather it is because of the pinching and negative attitude of seeing people towards visually handicapped. This factor compell the child to be somewhat psychologically different such as maladjustment denial to accept them as useful member of society and so on. The child is bound to achieve low because of these types of treatment which he receives, though he is quite normal as far as his mental ability is concerned.

It is the need of the present day that these children should receive equal treatment by the society as well as parents so that they can utilize their potentialities, capacities and abilities. They should be though in terms of "What they can do"? not in terms of what they cannot.

Normal seeing school students have also negative effects of their mental problems on the school performance. It is very right to say that for educating a child, the educator should first know his psychology. Otherwise there is double in being a successful educator. Mental tension, worries, anxiety, emotional disturbance etc. should be removed or at least minimised from the students' life.

As far as medical problem (toral) and academic attainment of visually handicapped and as well as normal seeing students are concerned, it is suggested that efforts should be made to displace all the reasons due to which children have
medical problems because higher the medical problems lower the academic achievement.

SUGGESTIONS FOR FURTHER RESEARCHES

The present research work has some delimitations because of the lack of resources, paucity of time and feasibility keeping these in mind the researcher, has the realisation that present study is not sufficient, competent, and adequate enough for predicting the educational achievement.

Education of visually handicapped in our country is in its infancy stage. Much has been done in west regarding their education but in our country very little amount of work has been done for the all round progress of this special group.

These children have to face many difficulties in their general life as well as educational life only because of the deprivation of one sense organ. They may be conceived as most useful, intelligent, industrious, etc., only when the society members involved in educational fields are aware of their responsibility towards this population. This awareness can be brought by innovations or researches in the education of visually impaired or special educational researchers can help a lot in this direction. Some of the prominent points which should be kept in mind by researcher or innovator are being suggested as follows:
1. Factors other than medical problems like personality, cognitive abilities, study habits, socio-economic status, level of aspirations, self concepts, self awareness, and so on which also effect the activities of the child in the field of education, should be studied by the researcher.

2. Studies should be conducted to find out the effects of some factors on academic performance after eliminating or controlling the intervening variables.

3. Comparative studies on academic achievement of visually impaired and normal seeing children should be promoted.

4. Statistical techniques other than coefficient of correlation and Fisherman's Z test should be applied to find out the more reliable results.

5. Comparative studies of personal, nonpersonal and educational achievements of visually impaired placed in segregated and integrated school systems should be conducted.

6. Researches based on the attitudes are acceptable of seeing population towards mainstreaming the visually impaired may be emphasized.

7. Though there is difficulty of access of the sample of researcher due to scattered nature of visually impaired, cooperative studies with decentralised centres of research should be promoted.

The above mentioned areas of innovation should be considered as the priority areas of research in special education.
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