CHAPTER - V

SUMMARY CONCLUSIONS, ISSUES AND SUGGESTIONS
SUMMARY, CONCLUSIONS, ISSUES AND SUGGESTIONS

SUMMARY
The present study aimed at examining the differences between normal and deaf children on perceptions of parental behaviour, perspective taking ability and cognitive functioning. It further compared the institutionalised Vs. non-institutionalised and Single Vs multiple deaf children.

The detailed objectives of the study were
I. To compare the normal and the deaf of the same educational grade in terms of,
   a) perceptions of parental behaviour;
   b) perspective taking ability, and;
   c) cognitive functioning.

II. To compare the institutionalised deaf with the non institutionalised deaf in terms of
   a) perceptions of parental behaviour;
   b) perspective taking ability;
   c) cognitive functioning, and;
   d) academic achievement.

III. To compare the single and the multiple deaf children on
   a) perceptions of parental behaviour;
   b) perspective taking ability;
c) cognitive functioning, and;
d) academic achievement.

IV. To examine the relationship between cognitive functioning and perceptions of parental behaviour, perspective taking ability, academic achievement and educational grade in the normal as well as deaf group.

V. To examine the nature of relationship between academic achievement and teachers' ratings in normal and deaf groups.

VI. To examine the nature of contribution of different background and psychological variables among deaf and normal children to their academic achievement and teachers' ratings.

The following hypotheses were tested

I. Deaf children will differ significantly from normal children on:
   a) perceptions of parental behaviour;
   b) perspective taking ability, and;
   c) cognitive functioning.

Comparisons between the two groups were also made on the above variables by work status of mother and family type.

II. Institutionalised deaf children will differ significantly from the non-institutionalised deaf
children on:
  a) perceptions of parental behaviour;
  b) perspective taking ability;
  c) cognitive functioning, and;
  d) academic achievement.

Comparison between the group were made by sex and group membership.

III. Single deaf children will differ significantly from deaf children having multiple deaf siblings on:
  a) perceptions of parental behaviour;
  b) perspective taking ability;
  c) cognitive functioning, and;
  d) academic achievement.

Comparisons between the groups were also made by sex and group membership.

IV. Cognitive scores will relate significantly to perceived parental behaviour, perspective taking ability, academic achievement and educational grade in deaf as well as normal children.

V. Academic achievement would relate significantly to teachers' ratings of normals as well as deaf children.

VI. Different background and psychological variables will predict academic achievement and teachers' ratings for
deaf and normals.

A total of 275 children constituted the sample. They were in grades IV to VIII studying in either municipal or government schools. Out of 275 total, 156 children were normal and 119 were deaf. Both the groups at all educational levels had almost equal representation from each sex. In grades IV & V equal number of deaf and normal subjects were tested but in higher classes the parity in the number of deaf children couldn’t be maintained. The strength of deaf children was lower. The variables included in the study were perspective taking ability, intelligence, parental acceptance rejection, academic achievement and teachers ratings.

An ex-post facto design was chosen for the study.

**Instruments used**

Parental Behaviour Inventory consisting of 20 statements regarding the behaviour of mother was standardised and administered to children to collect data on the perception of parental acceptance rejection by them.

Perspective Taking Ability : Facial Expression Test. - Having pictures of human being in different emotional states expressed facially were used to assess the perspective taking ability.
Kohs Block Design test and Alexander Pass along tests were used to measure the cognitive functioning of subjects.

Academic achievement index of students was formed by averaging the last two years' terminal examination performance.

Teachers' ratings were used as a measure of the children's overall performance.

All tests were individually administered to children during numerous visits to schools extended over more than one year. 2 x 2 x 5 analysis of variance, t tests, Mann-Whitney U-tests and stepwise regressions were used to analyse data.

The results may be summarised as below.

**Hypothesis 1**

Deaf children did not differ from normal children in

a) Perceptions of parental behaviour (t = .72 with df = 273)

b) Perspective taking ability (t = .95 with df = 273)

There were significant differences between the deaf and normal children on

 c) Kohs Block Tests (t = 7.80 with df = 273) and
d) Pass along Test ($t = 7.16$ with $df = 273$).

Conversion of intelligence test scores into I.Q. indicated that deaf children were behind normal children by about eleven I.Q. points. Deaf children had an I.Q. of 69 points whereas the normal children had I.Q. = 80 on Koh's Block tests. On Pass along Test both the groups scored lower than the Koh's Block Tests. However, the normal children outperformed the deaf here as well.

The analysis of variance showed no significant effect of sex, grade or group type (deaf or normal) either separately or in interaction on parental behaviour. The effect of grade separately, Grade X Sex, Grade X Group type and Grade X Group type X Sex were significant on perspective taking ability.

**Hypothesis II**

For hypotheses II and III both $t$ test and Mann-Whitney $U$ test were used. The findings using these techniques have been supportive of each other.

IIa Institutionalised deaf children perceived parental behaviour more accepting than the non-institutionalised deaf children ($t = 1.83$ with $df = 117$ and $z = 2.0749$).

IIb There were no significant differences between the institutionalised and non-institutionalised deaf on
perspective taking ability ($t = .05$ with df = 117 and $z = .2327$).

IIc Institutionalised deaf children did not differ significantly from the non-institutionalised deaf on Kohs Block Test ($t = .80$ with df = 117 and $z = 1.3902$).

There were significant differences on Pass along test between institutionalised and non-institutionalised deaf children ($t = 2.45$ with df = 117 and $z = 2.1775$). Results were in favour of the non-institutionalised children.

IId On academic achievement non-institutionalised children seemed to be doing significantly better than the institutionalised children ($t = 2.35$ with df = 117 and $z = 2.1584$).

To understand the mainstreaming effect, sex and institutional status related comparisons were made. It was found that the institutionalised boys had better perceptions of parental behaviour than the non-institutionalised boys ($t = 1.97$ with df = 58 and $z = 1.9244$).

On perspective taking ability no difference was found between institutionalised and non-institutionalised boys ($t = 1.27$ and $z = 1.2736$). Institutionalised boys did not
differ from non-institutionalised boys on Kohs Block Tests \((t = .52 \text{ with } df = 58 \text{ and } z = .3883)\), Pass along Test \((t = .77 \text{ and } z = .9678)\) and on Academic Achievement \((t = .44 \text{ and } z = .6392)\).

Comparisons between the institutionalised and non-institutionalised girls indicated no significant differences in perceptions of parental behaviour \((t = .56 \text{ with } df = 57; \text{ and } z = 1.0431)\), and; perspective taking ability \((t = 1.34 \text{ and } z = 1.1731)\). There were significant differences in favour of the non-institutionalised girls on cognitive functioning scores \((Kohs \ t = 1.82 \text{ and } z = 2.2556)\) and Pass along Test \((t = 2.37 \text{ and } z = 1.9910)\) and the academic achievement \((t = 2.61 \text{ and } z = 2.2940)\).

Sex differences for the institutionalised category indicated no significant differences between boys and girls on perceptions of parental behaviour \((t = .52, df = 25 \text{ and } U = 86.0 \text{ df 12/15})\), perspective taking ability \((t = 1.35 \text{ and } U = 67.0)\) and Pass along Test \((t = 1.36 \text{ and } U = 65)\). However institutionalised deaf showed significantly better performance on Kohs Block Tests \((t = 1.85 \text{ and } U = 55.5)\) and academic achievement \((t = 1.79 \text{ and } U = 56.5)\).

Sex differences among the non-institutionalised were not significant on perceptions of parental behaviour \((t = 1.29, df = 90 \text{ and } z = 1.2486)\). On perspective taking ability the
girls seemed to be significantly better than boys at .05 level of significance using the Mann-Whitney U test as z equalled 1.6733 while with t test the probability was between .05 and .10 (t = 1.65). The other values were for the Koh’s Block Tests (t = .42 and z = 0.1838). For Pass along Test (t = .11 and z = .1470) and for academic achievement (t = 1.11 and z = 1.3438). There were no significant sex differences thus on cognitive functioning and academic achievement.

Hypothesis III
Results on comparing single deaf with multiple deaf indicated that in general there were no differences between the two groups on

IIIa  Perceptions of parental behaviour (t = .56, df = 90 and z = .5957).

IIIb  Perspective taking ability (t = .82 and z = .9371)

IIIc  Koh's Block Test (t = .98 and z = .2605)

IIIe  The only significant difference between single and multiple deaf children was on academic achievement. It favoured multiple deaf children using U test. The values were t = 1.65 and z = 1.6464.

Further comparisons involving single or multiple status and
sex of deaf were made. Between the multiple and single boys there were no significant differences in the perception of parental behaviour \((t = .16, \ df = 46 \ and \ z = .1250)\) and on perspective taking ability \((t = .93 \ and \ z = .7049)\).

There were no significant differences on cognitive functioning scores on Koh's Block \((t = 1.46 \ and \ z = 1.0705)\) and Pass along Test \((t = .36 \ and \ z = .1081)\).

However there was a marked difference between multiple and single groups of boys on the academic achievement favouring the performance of multiple deaf boys siblings. The obtained values were \((t = 2.18 \ and \ z = 2.4121)\).

Comparisons of single and multiple deaf girls did not show any significant differences on any variable. The values on different variables were perceptions of parental behaviour \((t = .51 \ df = 42 \ and \ z = .6819)\) perspective taking ability \((t = .08 \ and \ z = .2317)\), Koh's Block test \((t = .22 \ and \ z = .9358)\), Pass along Test \((t = 1.47 \ and \ z = 1.4938)\) and on academic achievement \((t = .36 \ and \ z = .0815)\).

Sex comparisons among multiple deaf siblings did not indicate any significant differences on perceptions of parental behaviour \((t = 0.73 \ with \ df \ 18 \ and \ U = 39.5 \ with \ df \ 9/11)\). Perspective taking ability \((t = .18 \ and \ U = 47)\), Koh's Block Tests \((t = 1.58 \ and \ U = 29.5)\) and Pass along Test \((t = .70 \ and \ U = 34.5)\). The differences on academic
achievement were significant in favour of multiple boys ($t = 1.82$ and $U = 25.0$).

In case of single deaf children the sex differences were not significant on the perceptions of parental behaviour ($t = 1.01$, $df = 70$ and $z = .9391$). There was significant difference on the scores of perspective taking ability favouring single girls ($t = 1.67$ and $z = 1.6466$). No differences were found on measures of cognitive functioning. The values for Kohs Block Test ($t = .85$ and $z = .7690$) and for Pass along Test ($t = .62$ and $z = .7355$). On academic achievement both sexes performed at comparable levels ($t=.48$ and $z = .6404$).

**Hypothesis IV**

The findings indicated that for the deaf group of children the correlation co-efficient between performance on Kohs Block Design and perceptions of parental behaviour, perspective taking ability, academic achievement and educational grade were .087, .292, .039 and .268 respectively. The correlations of Pass along test were—with perceptions of parental behaviour, $r = .127$, with perspective taking ability, $r = .085$, with academic achievement, $r = .061$ and with the educational grade, $r = .225$. 
For the normal group the co-efficients of correlation of Kohs Block Test with other variables were as follows:

Perceptions of parental behaviour and Kohs Block $r = .031$, perspective taking ability and Kohs Block $r = .313$, academic achievement and Kohs Block $= .105$ and Kohs Block and educational grade $r = .531$. Co-efficients of correlation of Pass along as a measure of cognitive functioning indicated that Pass along with parental behaviour had a correlation value of 0.025, with perspective taking ability $r = .269$, with academic achievement $r = .096$ and with educational grade $r = .490$.

Results indicated a significant relationship between cognitive functioning and perspective taking ability. It was interpreted that children with greater intelligence had a higher perspective taking ability. There was a significant relationship between age related concept of educational grade and cognitive functioning. It appeared that both deaf and normal children developed their cognitive functioning as they progressed from one educational class to another.

**Hypothesis V**

Correlation co-efficient between teachers' ratings and academic achievement were .502 for deaf and .695 for normal children. Both the values were significant and indicated
that irrespective of the hearing status better the performance of children, higher were the ratings of the teachers.

**Hypothesis VI**

Results predicting the contribution of different background and psychological variables on academic achievement and teachers' ratings for the deaf and normal children indicated that in no case the psychological/Test variables explained any amount of variations in either the academic achievement or teachers' ratings. For the deaf group there was a significant contribution (6%) made by educational grade to their academic achievement and for the normal group only the S.E.S. explained about 7% of variance in academic achievement. In case of teachers' ratings no variable explained significantly the variance for the deaf group. The maximum contribution of about 3% was made by the variable of age. While in the normal group only S.E.S. made a significant contribution of about 6% to variance in teachers' ratings.

**OBSERVATIONS & DISCUSSIONS WITH PARENTS, TEACHERS & CHILDREN**

Some of the observations and discussions undertaken with teachers and parents of the deaf may be summarised below: These were used as supplementary to the quantitative results.
Parents - The identification of the handicap of child was done in most unscientific and staggered manner. Even after it was detected, for sometime parents were generally at a loss to understand what course of action to take. Unlike the more industrialised countries, in India after the identification of the handicap, parents were not visited by any social worker to guide them about how to cope with the handicap and rehabilitate the affected child. The hearing aids remained virtually out of reach for many handicapped children because their parents found it expensive to buy them.

Many parents, despite having a deaf child, could not communicate fully with the child because of the lack of a common language and training given to them. Generally parents of deaf children had a negative attitude and felt that such children were burden on them. Running to hospitals for check-ups of the deaf children and the reception given to them was found offending.

Teachers - Discussions with the teachers of deaf revealed that they lacked enthusiasm on their part. So much so that even after teaching for about 10 to 12 years they were unable to communicate with deaf children. Teachers felt quite resigned in their attitudes. Many reported insufficient pay and lack of other facilities as reasons of
their disinterest. Deaf child was not their concern.

Schools did not have any counselling programmes for deaf children either by teachers or by trained counsellors. 

Children —
Most of the deaf children had a feeling of being ostracized by their normal siblings and other children. Deaf children also expressed the feeling that given a choice they preferred to be alone or in the company of other deaf children rather than in the company of normal children. In terms of their behaviour the deaf children appeared to be quite loving, affectionate and inquisitive. They were always keen to know about the investigator as to who she was, what was the purpose of her visit and her family background etc.

LIMITATIONS OF STUDY
Inspite of all attempts to assess and evaluate the correlates of educational performance of deaf children systematically the study had some limitations. The results thus could not be generalized to the larger population. An important limitation of the study was the inability to exercise control on the hearing status of the parents. Studies had shown that the performance levels of deaf children born to deaf parents were different from performance of deaf children born to normal parents. Studies were also indicative of the fact that more acceptance was given to deaf children by their deaf parents
than by their normal parents (Hejblum and Moingeon, 1982). Because of lack of sample strength at different age levels no cross-sectional analysis could be made focusing on the developmental processes. Though in general the deaf children showed slower development on tests of intelligence, they were not necessarily retarded.

Lack of a well developed language for deaf was found to be a hinderance in collecting data on parental acceptance rejection dimension. It was observed that teachers as well as the deaf peers of the deaf could not communicate fully and smoothly with the deaf. Such observations had been reported in literature on deaf (Moores 1978; Biklen 1985). Future studies may attempt to over-come this weakness through long term sustained observations and other qualitative data.

ISSUES AND SUGGESTIONS

The findings of this study give rise to several crucial issues from the point of view of development and education of the deaf children. Some of these are discussed below:

Mainstreaming of Deaf Children: Though the concept of mainstreaming has not become popular in India this constitutes an important issue in the education of deaf. Mainstreaming means the inclusion of the handicapped children
in class rooms with non-handicapped peers for the optimum development of deaf. The passage of Public Law 94-142 has brought this into focus.

There are many versions of the mainstreaming concept, and it is important to distinguish among them in the choice of appropriate one into one's situation. The arguments have also been advanced for many years in relation to day schools versus residential schools and "segregated settings" versus "integrated setting".

One form of educational setting considered relevant to mainstreaming is full-time placement of the deaf in the neighbourhood school closest to the deaf child's home, where he or she may be the only child with a hearing impairment in his or her classroom, or indeed in the entire school. Some variations of this arrangement might include visits of itinerant specialists for tutoring or speech therapy, and the provision of a full-time interpreter if the deaf child depends on total communication. An older variant of "integration" for deaf children is the provision of a teacher trained for the deaf working in a special classroom within an ordinary school.

The "day class" arrangement is a model that has been in use for many years. Here, the children would often participate with hearing peers in non-academic classes such as home
science, physical education, and art. They would have opportunities to interact with normal students at lunch time and during recess. Small class size should make individualised attention possible. However, the age range in these classrooms, as well as the range in ability or academic achievement is often very wide. This can mean that the deaf child has no true peers against whom to measure or to pit him for skills or to look for intellectual stimulation or companionship. In the larger age pools of day schools or residential schools, it is possible to group students on the basis of age or ability or both, thus using teaching time and student self-help models more successfully than in settings where the number of deaf students is very small.

There is still another kind of educational prescription available to the mainstreaming of some deaf children.

This is found on the basis of experiences of the deaf children who are mainstreamed and happen to be the only handicapped child in his neighbourhood school. For some parents and educators this model is the ideal, the goal toward which early education and training are directed from infancy onward. It is true that this approximates most nearly the appearance of normalisation. The deaf child can live at home rather than travel to a residential school,
where he must live in a dormitory. He does not have to undergo the tiring experience of travelling long distances on a school bus in order to get to the special school. Classmates live nearby rather than being scattered over an extensive urban or a metropolitan area. This means that after school playmates are more readily at hand. Neighbourhood children of the same age are known through the classroom and are supposedly available for after school playing. The deaf child has the positive experience of sharing experiences of school and teachers with older and younger siblings. Parents can devote their energies to one school rather than dividing time and effort between schools where deaf and hearing siblings attend. The deaf child is not singled out for special treatment and made to feel different from neighbourhood friends and siblings. There are definite advantages of mainstreaming or integration, if it works in manner envisaged by its proponents. Unfortunately reality is always very different.

In the real situation, the deaf child is often overwhelmed by the large group of classmates. For many years, educators of deaf children have been working to reduce the size of classes in which deaf are taught. A class size of ten was once considered to be a goal toward which to work and then seven became the norm. Now six or even five deaf children are considered to be more than a special education teacher
can handle comfortably. Often in reality, mainstreamed deaf child is deposited in a classroom of 25 or 30 children. Instead of a teacher who has been specifically trained to work with children having hearing handicaps, the teacher in the mainstreamed classroom may never have seen a deaf child before, and may have had absolutely no orientation in what to expect or how to respond.

Integration requires communication. Acceptance is based on more than good will. It comes from comfortable interaction. Too often, an easy interaction between a deaf child and hearing classmates is a difficult and perhaps unrealized dream. For younger deaf children, this interaction may come more easily, especially if the deaf child is of an outgoing nature. The games and activities of younger children are less likely to be based on language. As children become older, their activities are less physical, and deaf children have more difficult time keeping up with others, the interaction becomes more and more difficult. The communication gets more and more strained. Deaf children feel difficulties in a situation where there is only one child who is "different". He wears a hearing aid, has unusual speech, and does not understand spoken messages as quickly as others do. This can create extreme difficulties of self-image and social development.
The thrust toward mainstreaming has come primarily from the effort to provide mildly mentally retarded children with needed opportunities for placement in regular classes.

Mainstreaming should not be misplaced as it may have the unintended consequence of forcing deaf children into classrooms where they cannot get the special help they need from teachers trained in special methods to help them. It should not be assumed that the classroom in the neighbourhood school with a single handicapped youngster is the "least restrictive environment".

Mainstreaming of the deaf needs to be implemented very cautiously particularly in view of the findings of the study that institutionalised deaf boys did equally well as the non-institutionalised boys on measures of cognitive functioning and academic achievement. The reasons can be many. One can assume that giving ample freedom and opportunity to explore to deaf children in their segregated setting would prove least restrictive for their development. It will help them develop self image and self concept important for total healthy development. But the non-institutionalised girls out performed the institutionalised girls on cognitive functioning and academic achievement. The finding that multiple deaf boys out performed any other deaf group in the present study on academic achievement,
though surprising, becomes significant for the mainstreaming.

It seems therefore that the mainstreaming may have culturally and socially specific ways which need to be carefully identified and adopted so that the quality development of the deaf can be ensured.

More publicity should be given to the needs of deaf children so that there is increased sensitivity of the general public of their responsibilities for the deaf. Alternate ways of mainstreaming should be tried on experimental basis. One alternative may be the opening of more special schools in the vicinity of normal schools so that after classes during lunch play periods and after school hours the two types of children can meet and know more about each other.

This type of mainstreaming is expected to be better than class room mainstreaming because in the latter case the differentials in perceptions and assimilation of the deaf do not stand as barriers in their growth and development. However such attempts are being experimented upon now in Delhi.

Family, School and State Relations The issue of close relationship between family, school and state agencies is rather central to both the development and education of the
deaf. Regular parent-teacher meetings can be used to enhance the understanding of the deaf children. Conferences of parents of deaf children with social workers and teachers should be arranged by State governments to discuss the problems and possible solutions. Since non-resident deaf child remains at home most of the time after school hours, the social worker should make home visits more often and impress upon the parents the affiliation needs of the deaf. It should be explained to the parents that the deaf child should not be isolated from the family discussions and family gatherings as he/she can develop a feeling of ostracization which would be debilitating for his/her personality development. Parents should be helped to identify ways of involving other normal children to try to make the deaf child actualise his/her potential to the maximum.

It should be realised that the isolation of the deaf child should not be permitted because the cognitive demand characteristics of the environment not only present a challenge to the child to act intelligently, but also influence the cognitive development and self concept.

Movement toward community action led by the deaf, increasing opportunities for the deaf, more job positions, greater attention to the deaf in the community by state agencies can help in turning deaf education into more promising
Role of Government and Municipal Corporations

One of the principles of special education is that if rehabilitation is to be effective and lasting, disabilities must be detected as early as possible and followed immediately by training and education (Kristensen, et al. 1987).

Contrary to this objective of the special education it was felt during this study that the identification of deafness is done in quite a segmented and unscientific manner.

No parent expects a child to be born deaf. If a child does not display symptoms of normal hearing pattern an immediate response of parents, instead of concern, is that the development is delayed. This basically could be attributed to two factors. One is the lack of awareness about the possible deafness and the possible intervention at the earliest. Secondly, the parents are not willing to accept that the child may be handicapped. Even if one has conscious fears, the fears are repressed under the wishful thinking of delayed hearing and speech as everyone wants to have the fittest child. Soon a stage comes when the hard reality silently starts glaring at the parents. At this stage parents start associating their child's probable
deafness to Karma (Past deeds).

The shock coupled with lack of education hinders their reasoning to the extent that instead of taking the child to hospitals for help, they start visiting herbalists and old experienced people. Considerable amount of time is wasted in the process which otherwise could be important for the child's development. Thus training during the formative years of life gets suspended till the child is of school going age.

Even after the parents are convinced about the handicap, because of the lack of information about the existing special schools they feel at a loss to handle the deaf child. It comes to them as a second shock in succession. Different parents depending upon their resources, adopt different means of coping up with this problem and probably all experience inadequacies in their efforts and outcome.

In view of the above it emerges that attempts should be made by the Government to formalise procedures of assessment and early intervention. This should be publicised through mass media. A clear distinction should be made between religion and handicap. Awareness programmes of a probable handicap should be publicised and used to educate young parents. Public attitude towards the handicap should be made to turn positive and responsible. Role of early intervention has
been suggested by Kristensen (1987) and Shulman & Rubinroit (1988).

Following may be offered as some suggestions for the government agencies to cope up with the needs and rehabilitation of deaf.

Assessment Centres

The functions of an assessment centre should include a wide publicity regarding awareness of deafness and early detection of it at home. It could be achieved in the same way as family planning, vaccinations, birth and death certificates etc. The following three points could be emphasized to the public, which could be instrumental in possible identification of deafness.

a. Responding to sound:

Turning of the head in the direction of sound (very young child, 5 months).

b. Shift of attention:

Shifting of attention to something meaningful and more clear which makes sound like a balloon hawker's whistle (Child after 2 years and above).

c. Repetition exercise:

Making the child repeat small taped sentences at low and high frequencies.
If deafness is detected by the above methods the child should immediately be brought to the assessment centre where each affected case should be registered. Simple and good test materials may be made available at the centres for early detection of deficits and development of teaching materials etc.

**Guidance for Parents**

As soon as the handicap is registered the social worker should visit the premises of the deaf to assist the parents. Parents should be given information and guidance on how to train and cope up with their handicapped child, where to look for help from staff of the centre. Visits between the staff and the parents could be exchanged. These centres can also guide the parents regarding special schools. Studies indicate that training of parents help in positive attitudinal changes about communication with their deaf children (Christensen 1986). Special education should be made available at the earliest (Anikeyeva, 1985).

Studies are indicative of the fact that deaf children of deaf parents show higher global self concept than deaf children of hearing parents. This should be understood in terms of greater acceptance of deaf children by their deaf parents than by the hearing
parents and the communication between the deaf parents and the deaf child. This makes the counselling of parents an imperative task as well as the need. In India the counselling at a regular basis is missing. If done it can go a long way in making a deaf child, a useful member of the society.

Counselling of the Deaf
Counselling of parents (Styles, 1986 and Stedt and Rosenberg 1987) is considered an essential part of rehabilitating the deaf. The counselling of the deaf himself/herself - the person in question - is an equally important aspect in proper realisation of the goals of rehabilitation. Matveyev (1982) observed that good counselling has positive effects on the attitudes and adaptation of the deaf. Backenroth (1986) observed that positive attitudes towards sign language and deafness should be considered as important factors in counselling. The need for counselling has also been stressed by Stedt and Resenberg (1987) and Briccetti (1987).

Auditory Aids and Other Materials for Deaf
Providing auditory aids and teaching materials to the deaf at low cost and easy availability of the same should be ensured.
Awareness Programmes

The available facilities, which are being given to the deaf should be propagated through mass media. As of today many of the handicapped don't know about the facilities available to them. Provision of summer schools for the deaf children may be made to keep them busy in creative work rather than forget their skills.

Role of Teachers

The findings of the researches make the teacher an important figure in the education of the deaf. It is important that the recruitment, selection and training of teachers of the deaf should be given proper attention. The need for teachers' training has been observed and recommended by Dailey (1979), Garber et al. (1984), Kluwin and Lindsay (1984), Craft and Hogan (1985), Johnson and Griffith (1985), Pernell et al. (1985), Brackett and Maxon (1986), Akamatsu and Stewart (1987). It has been observed during interaction with teachers of the deaf that they work to get into an occupation which pays them. The selection process does not include personal commitment as a criterion of their later success. During their teaching tenure periodically, good incentives should be provided to teachers to sustain interest in their defined goals. The teachers shall work harder if they feel rewarded
for their work. Better working conditions and incentive schemes that would give recognition to the work of teachers of the deaf should be provided. Otherwise ambitious ones may move to positions which are more rewarding and fulfilling. In training the teachers for deaf, sensitivity training and role playing methods should be employed to create in the psyche of the teachers greater awareness of deaf. The training of teachers should be so oriented that they can control the environment in such a way that the deaf child feels wanted, can give meaning to life and no longer works with an inferiority complex. Periodically refresher courses should be organized for teachers of the deaf to acquaint them with new methodology and materials.

Teachers must realize that education without making deaf understand the meaning of life, does not help in rehabilitation. Educators must provide these children plentiful opportunities to succeed. Children need to see a relationship between their effort and consequences, if they have to continue to learn, grow and achieve (Grimes and Prickett, 1988).

Pay of Teachers: The salaries of teachers in special schools have been lower than the teachers in ordinary
schools. After a certain period of time people who are underpaid, even if they made initial choice with full knowledge and understanding of the relative compensation scale, may feel slighted or even exploited. The most ambitious may move to positions where the work is less frustrating, better paid and less difficult. Eventually these higher expectation can lead to bitterness and lack of job satisfaction.

It is difficult and challenging for the teachers to work with the deaf. They need social and professional support. The policy making process should include the teachers, parents and the deaf themselves rather than the bureaucrats alone, who are ignorant about the actual problems of the deaf. Problems should be solved in a participatory manner.

Residential Care

For deaf children who need to be placed in a residential school to develop their personal, emotional, social and cognitive lives to the point where they are self supporting and free to determine their own life style, it would appear that institutionalisation in a special school is less restrictive than integration in a normal school. Still it was suggested that since a good proportion of deaf children stay in residential schools, the residential atmosphere, must be upgraded to provide a quality to counteract the
restrictiveness of the placement. This may be done either in terms of improvement in general atmosphere or better training of the residential staff. Erminel (1989) and Mulholland (1989) also observed the same.

FUTURE RESEARCH

A few issues and suggestions that seem relevant to future research may be summarised below:

- Comparisons should be made between achievement of deaf children of deaf parents and deaf children of hearing parents. It is believed that deaf children of deaf parents show better achievement than deaf children of hearing parents. It needs to be tested. Under Indian conditions the problem of parental acceptance can also be studied for these two groups.

Findings indicated consistently that the deaf children of deaf parents are superior in academic performance and English language ability to deaf children of hearing parents (Meadew 1968a; Stuckless & Birch, 1966; Vernon & Koh, 1970). These differences are attributed to the use of manual communication with deaf children, easier acceptance of deafness by deaf parents and the resulting reduction of strain during transitional stages of the life cycle.
Though no one chose to have a deaf child, there is an obvious need for careful detailed observation of the behaviour of deaf children in natural settings to determine the extent to which the environmental challenges for deaf children are different from those for hearing children and to determine the extent to which such differences require different modes of adaptation. In applying an ethnological approach to the study of human beings, there is need to describe the individual's intelligent behaviour as well as the cognitive demand characteristics of the environment (Charlesworth 1974). The cognitive demand characteristics not only challenge the individual daily to act intelligently, but also influence the development of his intelligence. Pecora et al. (1986) concluded that normal children of deaf parents found such an environment helpful in making them more responsible and mature at earlier age. Therefore one must study the demands placed on the deaf individual by the environment.

The results of such studies can obviously give direction to counselling and policy making.

There is a need to have representative samples at different age levels for cross-sectional analysis to
assess the developmental trend in deaf children.

To promote proper development of deaf children. It is required that (a) the environments that encourage optimal development of children be identified, and (b) those areas in which deafness has negative implications for the development of the individual be identified. Once these areas are identified efforts may be made to overcome the hurdles, specially because in their ontogenetic development thought and speech have different roots.

Furth and others have observed a tendency among researchers to compare deafness and deaf individuals with models of deviancy, deficiency, or pathology. Instead a healthier and more positive approach is needed towards identifying strengths and fostering optimum development. Hinde (1966) has argued that if a species appears to be deficient in some faculty as defined by a particular test, one must refer back to the natural situation to assess the extent to which this is compensated by the development of other faculties. A systematic study of this type may help in framing policies of educational and vocational training for deaf children.

The deaf children are affectionate and have greater
cognitive skills, it would be interesting to find out the extreme age limits/periods for their development. This would need careful monitoring and evaluation to see if any interventions can be adopted to hasten the process of development.

It is suggested that more indepth studies involving inter disciplinary approach should be undertaken for an overall understanding and to meet the needs of the deaf adequately. Harvey and Dym (1987) observed that many hierarchically arranged bio-psychosocial levels influenced the development of deaf children.

Finally it is suggested that more research should be encouraged by bodies like ICSSR, NCERT and other institutions for the deaf. These findings can be used to improve the total situation for the deaf. Though Sharma & Jhangira (1987) and Sharma (1988) have done some work for teachers of special education, this needs to be done for the variety of handicapped. The gap between practice and theory should be bridged.
endurance level as compared to normal. Comparing deaf and normal children on endurance tests would be a worthwhile exercise. If the assumption is proved, the intelligent deaf children could be trained to be successful nurses and teachers for young deaf children as they can exhibit greater patience and would have greater feeling for their deaf brethren.

More empirical research is needed to examine the impact of different attitudes and of normal social acceptance on the development of personality and self image of deaf.

It is observed that deaf people lack social skills. Research is needed to identify different methods of training to develop social skills in the deaf.

Levine (1986) has cited evidence from recent studies indicating that deaf individuals do not develop hemispheric specialization for verbal and non-verbal processing in the same manner as the normal hearing population. It may be interesting to assess problems related to the nature Vs nurture controversy in case of deaf children. Such experimental research is needed to provide a rational base to educational policies.

Since deaf children show slower rate of development of