

CHAPTER 16

CHILDREN'S HANDICAPS

1. INTRODUCTION

A child's **handicap** points to an **aggravating** circumstance. Such a child is limited or handicapped by a specifiable deficiency regarding his given potentialities, e.g., deafness, blindness, epilepsy or a physical defect. In another sense this also refers to a far-reaching deficiency regarding his educative situation such as a handicapping environment or alcoholism of one or both of his parents.

The teaching needs of these children differ drastically from those of "normal" children in the mainstream of teaching in that the teaching has to be of such a nature that they will be able to optimally actualize their potentialities. However, the ideal is to keep these children in the mainstream of teaching as far as is possible (see Jenkins et al., 1985; RGN-report, 1981).

Teaching these children is more specialized and often very expensive apparatuses and aids are needed to enable the teacher to provide the best possible teaching for a handicapped child. Often the physical circumstances of such children are of a nature that they cannot manage in an ordinary school with, e.g., their wheelchairs, etc.

Gadow (1982) indicates that teachers are not trained to handle medications and their effects. Thus, it is necessary to provide special training to those who work with such children. He proposes that in-service training courses be offered because the teachers are already working with these children and know their particular handicaps. Also Guarino (1982) indicates that the environment in which a handicapped child receives his instruction must place as few restrictions on him as possible. This is not always the case if a handicapped child finds himself in mainstream teaching.

Each form of handicap presents its own particular demands, also on teaching, and in order to provide the best teaching, specific schools for children with particular handicaps should be provided, e.g.,

schools for mentally retarded, physically handicapped, deaf, blind, epileptics, etc.

Next, the various forms of handicaps are discussed along with their implications for teaching.

2. HEARING HANDICAPPED CHILDREN

2.1 Orientation

A hearing handicap impairs a child not only in a physical dimension. The indirect effect of this handicap touches the entire range of his being a person. Because of his defective hearing he often is viewed as developmentally backward or even mentally retarded. Sometimes such children are viewed as unfriendly and "different" because they hold themselves aloof. A necessary consequence of defective hearing is a speech defect since these children learn language with great difficulty. Without language, communication is very difficult. The hearing handicapped child also misses the affective experiences and nuances that are embedded in speech. The intonations of a mother's voice as she talks with her baby or small child are not accessible to this child. The parents' ways of educating change if they have a deaf child. A deaf child is brought up differently than hearing children in the family (see Suran and Rizzo, 1983: 223). Next some aspects concerning the hearing handicapped child and educating him are discussed.

2,2 The dynamics of educating

The degree of a child's hearing handicap largely determines the extent to which he is isolated from the world of the hearing in the family. Normal-hearing children in the family hear conversations that are not necessarily carried out with them, e.g., conversations between the parents, between other children in the family and the parents and also conversations where the parents and other family members converse over the telephone. Without exception a hearing handicapped child in fact is hereby excluded since spoken language is the most important means of communicating in these conversations. Parents of deaf children do not always keep them informed of the content of these conversations especially because it would take too much time and it is accepted that they are not yet really interested. The dynamics of educating that a deaf child has to

deal with is "attenuated" in comparison with that of the other children in the family.

The parents' educative conduct also changes as they intervene directly with a deaf child in the family. From research reports discussed by Suran and Rizzo (1983) mothers of deaf children are more inclined to be more strict, more prescriptive in their control and much more rigid in their educative intervention. The mothers make very little use of approval and use more punishment in disciplining deaf children than hearing children. It also was found that deaf toddlers are more passive in their relationship with their mothers than are hearing toddlers. Parents of deaf children experience much more frustration in educating their children (Suran and Rizzo, 1983: 223). The reasons for this are varied. According to Sanders (Cruickshank (Ed.), 1980) after they have assimilated the initial shock of the deafness of their child, they have to construct another image of child-being for themselves because now their little child is "different" from what they had thought he would be and they have to formulate new expectations with respect to educating this deaf little child. The parents have to respond in other ways than through language to these children's basic needs for love, acceptance and understanding.

According to Meadow (1975) behavioral and emotional problems occur no more often with deaf than with hearing children. According to him, deaf children indeed have more "problems of living". Various researchers (see Hallahan and Kauffman, 1982) are in agreement that the way in which other persons in the child's environment accept his handicap is a decisive factor in the possible onset of behavioral problems. According to Meadow (1975) there indeed are particular personality characteristics that arise more frequently in deaf children; e.g., as a consequence of their social isolation they are more disposed to be egocentric, they are less creative, and they show a lack of empathy. It also seems that young deaf children more often show their frustrations and aggressions physically by means of "temper tantrums".

2.3 Intellectual abilities

For a long time it has been accepted that language is a prerequisite for thinking. Piaget (1951) takes opposition to this standpoint. According to him cognition develops out of experiencing the environment and that this natural development of cognition forms

the basis of structured language. Related to this issue Vernon (Suran and Rizzo, 1983: 222) has found that deaf children of deaf parents achieve better in school than deaf children of hearing parents. He concludes that deaf parents early in the lives of their deaf children provide them with the opportunity for communicating and for cognitive actualization by making use of sign language early in their lives.

Furth (1973) is of the opinion that deaf children are not necessarily less intelligent than normal, hearing children. He has done research on deaf children's ability to master concepts dealing with symmetry, similarities and opposites. In a comparison with the abilities of normal, hearing children to master these same concepts, he found that deaf children fell behind only on concepts having to do with opposites. According to Firth, opposites have to do with language and experiences with language while symmetry and similarity are unconnected with language. It is difficult to convey the concept of opposite in sign language. He believes that the preference for language dependent concepts is not enough to hinder the cognitive development of deaf children. According to him, teaching is of decisive importance and thus teachers in school have a very important task in this regard. Researcher who came after Furth (see Hallahan and Kauffman, 1982; Suran and Rizzo, 1983) believe that Furth's standpoint is concerned only about spoken language (in Furth's case English) and problems that the deaf have with conceptualizing rather refer to a lack of communication between the non-hearing and the hearing who have mastered only a spoken language.

Although there still are many opinions about the influence of language and its acquisition on cognitive development, most researchers concur that formal teaching faces a great challenge in instructing deaf children. A deaf child has to be supported to optimally actualize his personal potentialities (see Steyn, 1976).

In determining IQ scores of deaf children an educational psychologist faces many problems. So far as its instructions are concerned, performance scales also rely very much on the spoken word. Thus it can readily be accepted that a non-verbal IQ score that is determined does not reflect the true intellectual abilities of a deaf child.

2.4 Scholastic achievement

There are divergent opinions in the literature about the school placement of deaf children. The proponents of mainstreaming believe that it is important for deaf children to be able to maintain themselves in a hearing world and that this has to begin at the level of schooling.

Reading ability goes hand in hand with language mastery and is one of the primary co-determiners of academic achievement because reading is one of the most important means of communication in the framework of an ordinary school.

Since the deaf or seriously hearing handicapped children's level of reading ability is much lower than that of hearing children of the same age, this can lead to much tension, feelings of inadequacy and a poor self-image.

Also, there are divergent opinions about the methods of teaching deaf children. Proponents of speech reading believe that children have to be discouraged from using sign language because this influences effective communication with hearing persons. In contrast, promoters of teaching through sign language state that the deaf or hearing handicapped child in all cases does not learn language on a level comparable to that of their peer group and that they can be guided to a higher academic level by means of sign language.

Today the concept of total communication is gaining more acceptance. This embraces a combination of speech reading and sign language. Research shows that children who follow this method of instruction are more disposed to use verbal language and that their communication with their fellow persons is more effective (see Suran and Rizzo, 1983).

3. THE VISUALLY HANDICAPPED CHILD

3.1 Orientation

The blind or visually handicapped child is not isolated in the same degree from the world and his fellow persons as is the hearing handicapped child. However, this is not a handicap that influences a child only on a visual level but that renders a different dimension and qualification to all of his other modalities. The self-concept of a

visually handicapped child often is negatively colored. The kinesthetic orientation of the self in space often is a problem with which the children must be helped (Samuels, 1981: 127). Next a few aspects of educating a visually handicapped child are discussed.

3.2 The dynamics of educating

In general, blind persons are viewed as helpless and dependent by their fellow persons (Cruickshank, 1980: 292) and this greatly influences parental intervention with them. Research has indicated that parents' behavior with respect to their visually handicapped children show the following tendencies (Samuels, 1981): sound compensatory actions; over-compensating behaviors, denial, defensive activities; withdrawal and activities that point to a non-orientation or mis-orientation. In order to help the parents to accept their child's handicap and to guide them in educating their blind child it seems that the most effective way is to help the child to an optimal personal development.

As in the case of hearing handicapped children, emotional and behavioral problems arise with blind children also mostly as a consequence of how family members handle his defect. In this connection, Cruickshank (1980; 294) says [in English] " ... emotional disturbances and maladjustments result more frequently from the conditions and social attitudes of the blind person's environment than from the sensory handicap itself". Also, Suran and Rizzo (1983: 269) conclude that there is a positive correlation between the extent to which the parents accept the child's handicap and the blind child's personal orientation.

Blind babies need a lot more physical contact with their mothers in order to develop adequately. They cannot follow their mother with their eyes and in doing so build up an emotional bond with her. They have to feel and hear her, otherwise such a baby doesn't know where she is. The facial expressions of visually handicapped children also are less expressive than children with normal vision and they will not laugh as readily as a sighted baby when he hears her voice (see Suran and Rizzo, 1983: 269; Cruickshank, 1980: 308).

To a great degree, a blind child is dependent on sound to explore and recognize his world. Many sounds are not continually audible, e.g., wind, and this can lead to uncertainty and tension.

3.3 Intellectual abilities

Visual perceptual abilities not only offer a particular sensory dimension to a sighted person but they add additional dimensions and qualifications to his other modalities. The visually handicapped child forfeits these possibilities of exploration. Also, in the motor sphere early on they often show an image of developmental backwardness (Suran and Rizzo, 1983: 262). The opportunity for the child to explore because he takes the initiative to move out into the world is for these children noticeably curtailed by their handicap (see Van der Merwe, 1983). For visually handicapped children there is less opportunity to exercise specific skills as part of their intellectual potentialities. It was found that children who were in a protective environment and had attained a low IQ score showed remarkable progress by means of more appropriate teaching methods (Hallahan and Kauffman, 1982: 290).

Also it is not accountable to view language ability as a possible indication of intelligence since a visually handicapped child cannot build up visual associations and language mastery occurs much more slowly than in sighted children. According to Suran and Rizzo (1983: 265) this backwardness is erased by the time he enters school and then he is inclined to over-verbalize because in doing so he orients himself and this also has to be viewed as an attempt to differentiate things that he cannot visually perceive and distinguish.

The hypothesis that blind children compensate sensorily for their visual defect in that their level of tactual and auditory perception are on a much higher level than that of the average normally sighted child of their age is disconfirmed by the research of Hare et al. (1970). In this regard, they found no clear differences. Lowenfeld (Cruickshank, 1980: 272) refers to the limited opportunities for observation of children who in particular make use of touch as a means of observation.

Things that are too large or out of reach (e.g., the moon and clouds and even a tree) can only be described by analogy with another tangible object. Abstract concepts such as a shadow, the sky, light and color can only be described by analogy with other sensory modalities.

When the intelligence, as potentiality, of a visually handicapped child is determined often use is made of the results obtained on only the verbal part of the intelligence test. There appears to be no significant difference in the scores obtained by visually handicapped and normal-seeing children (Suran and Rizzo, 1983: 291), although the responses of the visually handicapped children are on a more concrete, functional level. Many fewer abstract concepts are used by these children than by normal-seeing children.

3.4 Scholastic achievement

There still are a great variety of opinions about the task of the school in teaching visually handicapped children so they can achieve optimally. There are investigators who hold the view that there has to be much more concentration on auditory aids in the classroom while others defend concentrating on Braille and enlarged printed matter if a child indeed possesses a limited visual ability (see Hallahan and Kauffman, 1982). All researchers, however, agree that the quality of teaching determines the degree of backwardness in the cognitive development of the visually handicapped child.

4. NEUROLOGICAL HANDICAPS

4.1 Introduction

According to Hallahan and Kauffman (1982: 326) trauma to or deterioration of the central nervous system is the most common cause of physical handicaps in children. Brain damage can be so slight that it does not restrain the child's functioning at all or it can be so acute that it forces the quality of his life to a very low level. The results of brain damage can be manifested in a variety of symptoms among which are intellectual retardation, learning and perceptual problems, distractibility, emotional, as well as speech and language problems. Injuries to or anomalies of the spinal cord might lead to a loss of sensation, an inability to control voluntary movements or even an inability to move parts of the body.

Practically all children with damaged central nervous systems require special equipment and/or methods of instruction in order to be able to optimally actualize their personal potentialities.

Some deviations of the central nervous system are discussed next.

4.2 Cerebral handicap

A cerebral handicap generally involves a motor dysfunction with related muscle activity and problems with muscle control. Various other symptoms are found in children with this handicap depending on the part of the brain that is impaired. The most common types of cerebral handicaps that occur are the following (see Nel, 1955; Samuels, 1981: 111; Hallahan and Kauffman, 1982: 329):

* **Spastic type:** An imbalance in the muscles appears. The muscles contract as if there is an abrupt movement and uncontrolled movements appear. Approximately 50% of all cerebral handicapped children show signs of spasticity.

* **Athetotic type:** Involuntary jerky movements especially of the fingers and hand wriggles appear. The uncontrollable contraction of groups of muscles that sometimes also include facial muscles, result in continual uncontrolled movements. These movements stop when a person sleeps. Approximately 25% of cerebral handicapped children are affected in this way.

* **Ataxic type:** This is characterized by problems with fine and gross movements. Spatial orientation is a problem and the children experience problems of balance and run with difficulty. Approximately 25% of the children are affected in this way.

The rigid type is characterized by very stiff, tense muscles and such children find it very difficult to run. It is a type where tremors in particular muscles continually appear (involuntary rhythmic movements), and **the atonal type** that is characterized by relaxed, almost "lifeless" muscles appears very seldom. Cerebral handicapped children sometimes show a mixed image.

The causes are diverse in nature, such as genetic, traumas before, during and after birth, lack of oxygen, a toxic state and a high fever. Premature babies are very susceptible to this handicap.

The intellectual abilities of the cerebrally handicapped are not necessarily affected by the handicap. Various researchers (see Cruickshank, 1980: 371-372) have found that approximately 45% of these handicapped children also are intellectually handicapped (IQ < 70), 30% were poorly endowed (IQ 70-89) and 35% were average or above average (IQ > 90).

Since as babies these children have to be hospitalized for a long time, very early a problem of bonding with the mother easily can arise. The manifold problems that these children experience in their everyday life, the "differentness" of their existence and appearance and the physical limitations the handicap places on them predispose them to emotional problems.

The problems related to teaching these children are just as manifold. Provision has to be made for possible hearing, speech and visual problems; perceptual dysfunctions often appear and the physical limitations of the children continually have to be taken into account in the teaching situation.

4.3 Epilepsy

Epileptic seizures are the consequence of a periodic imbalance of electrical energy or activity of the brain cells. The reason for this activity is not known although clearly many factors can give rise to it, e.g., oxygen deficiency, poisoning, congenital deviations, infections, tumors and birth trauma as well as any brain injury before or after birth.

A person can have a few single epileptic seizures or repeated ones. The following types of epilepsy are distinguished (see Hallahan and Kauffman, 1982: 332; Suran and Rizzo, 1983: 292).

* **Major or grand mal type:** These seizures often are preceded by an **aura**, e.g., a taste or a smell or other characteristic sensations. Such a seizure usually lasts from two to five minutes although cases are recorded that have lasted for an hour. Usually a child does not remember the seizure. The children often feel sick after a seizure; their muscles are stiff, they sometimes appear confused; headaches appear; and often they are very exhausted.

* **Petite mal** seizures are characterized by a short (1/2 to 1 minute) interruption of consciousness. Sometimes this is paired with fluttering eyelids and jerking movements of the arms and legs. Such seizures can appear as often as 100 times a day and often are seen as a behavioral problem or distractibility.

* **Psychomotor** seizures are characterized by a sudden interruption of being conscious paired with confused behavior such as a meaningless movement, e.g., chewing movements, rubbing a particular part of the body, disconnected speech or inadequate emotional behavior, e.g., sudden fear or rage. Often there is a loss

of memory of behaviors during a seizure. This can also appear while a child sleeps and then he can walk in his sleep.

* **Myoclonic** seizures are involuntary jerking movements of the arms and legs that generally appear as a person falls asleep or awakens.

* The **Jacksonian** type is where a person does not lose consciousness and experiences a tingling sensation or involuntary movement in a specific part of the body that readily spreads to still larger parts of the body. The affected muscles might feel tired after the episode.

Most forms of epilepsy can be effectively managed with the help of medications. At present there are no indications that epilepsy leads to lesser intellectual abilities (Suran and Rizzo, 1983: 292).

Children who have epileptic seizures sometimes appear to be restless and disoriented; they are inclined to wander around aimlessly and sometimes think illogically. Hyperactivity and temper tantrums appear sometimes and the dissociations in perceptions and sensations can appear as part of a seizure and awaken excessive anxiety in a child since he doesn't know what is happening to him (Samuels, 1981: 114).

In teaching these children provision has to be made for the interruptions in consciousness, subsiding of attention, the cognitive lack of order that springs from the affective lability and perceptual disturbances that appear. The teachers have to know how to support these children affectively and of necessity also possess sufficient medical knowledge about epilepsy in order to know how to help them at the time of a seizure.

4.4 Spina bifida

Spina bifida (slit in the spine) is a birth defect of the spinal cord and of the spine that usually encircles and protects the cord. The defect can appear anywhere along the spine. A part of the spine is not grown together or fused. Through this opening there is an eversion of the spinal cord and/or surrounding membrane. The result of this handicap can vary from less serious to a serious and complex condition. There are two main types of spina bifida:

* **Spina bifida occulta** (the so-called "hidden" type):

This type seldom causes serious handicaps. One or more of the bones of the vertebrae has not developed fully but there is no eversion of the spinal cord and/or membrane. This spinal defect usually is indicated by a slight swelling, a little hole in the skin or locks of hair. In some cases there are no externally perceivable signs of the deviancy and its presence can only be determined with the help of an x-ray.

* **Spina bifida cystica**

In this type there is a saccate eversion of part of the spinal cord tissue that is covered by a thin layer of skin. The degree of handicap depends on how much tissue is everted. Two types are distinguished here:

* **Meningocele:** this is a less serious type where the eversion consists only of cerebrospinal fluid and the membrane that normally cover the spine cord;

* **Myelomeningocele:** this is the most prevalent and serious type. The eversion includes not only cerebrospinal fluid but also nerves and even part of the spinal cord. There always is a degree of paralysis from the damaged vertebrae and below them and often there also is an inability to control the bladder and excretion.

Children with spina bifida also often manifest hydrocephally that surgeons sometimes treat by putting in place a draining tube that carries the excessive cerebrospinal fluid away from the brain and into the stomach. The condition of hydrocephally and other related conditions can lead to brain damage. In itself, spina bifida does not lead to brain damage and a resulting decrease in intellectual potential (see Guide to genetic deviations).

The parents have to be helped by a professional person to overcome their initial shock and to ensure them that they are not guilty for the condition. In larger cities there are support groups for parents of children with spina bifida.

Children who can walk by themselves or with crutches can attend an ordinary school; seriously handicapped children are referred to schools of special teaching. At these schools they also can receive more specialized help such as occupational or physiotherapy.

According to Samuels (1981: 108) children with spina bifida often have a poor self-image, especially those children who do not have control over their organs of elimination. Withdrawal and depression

often appear and they frequently are referred for specialized help in this regard.

5. PHYSICAL HANDICAPS

5.1 Introduction

Sick and physically handicapped children often disrupt family life and hospitalization with which the illness or deviation is paired often are experienced as traumatic by the child and parents. Also because of their illness they often are absent from school for long times and the appearance of learning and scholastic problems is not unusual. Further, a direct consequence of a child's illness is socialization problems for a child and sometimes also for the parents. Because he doesn't go to school for long periods of time he does not have friends and depends mostly on the adults who care for him to meet his social needs. Such parents easily become socially isolated because they continually have to be near their child in case he needs them and it usually is difficult to transport the child. Thus, they are housebound. The cost connected with medical care (equipment, medications and more) of the child sometimes leads to financial problems in the family, a factor that can have an unfavorable influence on family relationships.

The handicap's influence on the child cannot be overlooked. The self-concept of children without specific limbs or without the use of particular limbs mostly is influenced negatively by the handicap. In any professional intervention with the children and their families all of the aspects mentioned have to be taken into account. Some physical handicaps now are discussed.

5.2 Muscular dystrophy

Many varieties of muscle degenerating illnesses are known. The first signs of the illness can manifest itself at various stages of a child's development. There are two main types that appear, namely, the **Duchenne**-type that only appears in boys and usually has its onset within the first four years of life. In addition, there is the **pseudo-hypertrophy** form that has its onset at approximately seven years. In this latter type the muscle tissue is replaced by fat cells and the child appears healthy and strong. In both cases the dystrophy of the muscles can reach such proportions that a child is dependent on a wheelchair to move around. The second type appears in both boys

and girls and decreases a child's intellectual potentialities. With the first variety a child's intellectual potentialities remain intact (see Hallahan and Kauffman, 1982: 227; Samuels, 1981: 104).

It is important that the children, while movement of the limbs is still possible, should move as much as possible to work against the dystrophy of the muscles. The degree of attention the children receive from their family members, especially their parents, often leads to relationship problems within the family.

5.3 Cystic fibrosis

Cystic fibrosis is a genetic metabolic deviation. Its origin is unknown and there is not yet a cure for it. These children often have an insatiable appetite but do not grow physically as expected; often they have lung infections and cough a lot and at birth their fingers have often grown together. Problems with the digestive system also often appear.

Medical therapy is aimed at relieving symptoms. Often these children are afraid they will suffocate because their airways easily become blocked by mucous secretions. Negative bodily experiences are common (Suran and Rizzo, 1983: 294). If the lung function problems are under control the children usually can attend school. Most of the patients die of primary lung infections and related secondary heart failure before they are twenty years old (Samuels, 1982: 118). Since these children always live in the shadow of the dead, the illness has a drastic influence on the family members.

5.4 Hemophilia

Hemophilia is the label for a group of illnesses where there is a deviation in the composition of the blood that leads to it not clotting. The illness appears very seldom in girls although they are always the carriers of the inherited illness. A child has to continually protect himself against injuries since the slightest injury, even a bruise, can lead to serious bleeding. The illness has far-reaching consequences for the patients as well as their parents. According to Suran and Rizzo (1983: 294) the earlier inclination was to keep these children home for treatment and let them attend a regular school as far as possible. However, these children are very limited in their involvement with friends. According to Samuels (1981: 118) there is a positive correlation between the parents'

acceptance of the child's illness and the child's successful orientation in ordinary life. In addition, Suran and Rizzo (1983: 294) indicate that there is the danger that the parents of these children will be over-protective. Their intellectual potentialities are not influenced by the illness.

5.5 Leukemia

According to Suran and Rizzo (1983: 294) leukemia is the most prevalent form of cancer in children. As a result of the advancement of providing chemotherapy a child's chances of survival now are very good. The initial shock that the diagnosis gives to the child and especially the parents can lead to serious emotional problems for all of them. The side-effects of the treatment, especially the associated loss of hair, can lead a child to withdraw from his friends and even barricade himself in a world of his own. Parents sometimes withdraw their affection from their child with leukemia. They are already involved in separating themselves from the child and thus distancing themselves on an emotional level. Then the child misses his parents' giving him affective support. If he is cured, bonding first has to occur again between child and parents and relationship problems in the family are not unusual in such a situation.

5.6 Asthma

Asthma appears more in children and adolescents than in adults (Schwartz and Johnson, 1981: 237; Sarafino and Armstrong, 1980: 436). The state of the illness is brought about by allergies, infections and psychic factors (see section 6 below). Allergies and infections can be controlled relatively effectively with medications. For a child and also for his parents, an asthma attack is traumatic and, as an emergency measure, often the child is hospitalized. This can lead to the parents over-protecting the child. As a consequence of allergies such a child cannot participate in sports activities and this can lead to problems of social isolation. A side effect of a medication can prevail.

5.7 Diabetes

As a metabolic deviation diabetes has a drastic influence on children's lives. They have to hold to a strict diet that prevents them from eating what their friends eat and their daily

administration of insulin limits their movements to the degree that they have to remain near their parental home or a medical facility. Psychological and especially emotional problems often spring from the "differentness" of the children; they experience themselves as different from their friends. According to Samuels ((1981: 116) sometimes children with diabetes use their diet to manipulate their parents and this can be viewed in the same light as suicidal tendencies because if the blood sugar is too low or an overdose of insulin is administered this can lead to death.

5.8 The chronically ill child

According to Suran and Rizzo (1983: 295) children do not experience illness objectively as something that is happening to his body but they find sense in their illness in subjective ways by relating it to something they have done. Pain, hospitalization and separation from their parents often mean they are being punished for something they have done. These behaviors would then lead to the illness, e.g., eating too much candy gave rise to diabetes, too much running to heart problems, etc. Some children avoid any conversation about their illness or handicap and it is important that professional experts and parents be encouraged to talk about their illness so that misunderstandings regarding its cause and course can be cleared up.

Long-term illnesses can lead a child to lose contact with his surroundings because he is increasingly thrown back to his body and in doing so withdraws into a world of his own and becomes alienated from reality. Thus, it is important that a chronically ill child continually be exposed to new challenges and experiences (Johnson and Medinnus, 1965: 450). This can be done through teaching. Thus, it is necessary that the ill child continually receive instruction whether this is at home or in the hospital. According to Suran and Rizzo (1983: 304) the social becoming of such a child largely depends on the school's set up and therefore it also is necessary that the child be exposed to a teaching program.

The parents of a chronically ill child often have a need for professional help to assimilate the situation. According to Johnson and Medinnus (1965: 451) the parents often are angry at their child or they even reject him. Again, others over-protect and are overly concerned about the child.

5.9 The dying child

The perception of death by young children under the age of six is not related to its irreversibility and if such young children know they are going to die, their greatest fear is separation from their parents (Sarafino and Armstrong, 1980: 450). Children in the age group of 6 to 10 are aware of the seriousness of their illness although they will not say that they are dying. It appears that they also experience anxiety (Suran and Rizzo, 1983: 314). According to Schowalter (Suran and Rizzo, 1983: 315) a dying adolescent experiences feelings of despair and unfulfillment.

The parents, and the child who is dying, must be granted the opportunity to mourn. The parents also need to be helped to overcome their initial shock and denial and to accept the fact that their child is dying. Only then can there be a decision about whether and how the child be informed about the nature of his illness.

According to Morse (1970) there are two aspects to guiding dying children and their parents. First an attempt has to be made to make the time together of the child and his parents rich and meaningful; and second they have to be helped to assimilate the inevitability of death. He proposes that a team of professionals be used for this but that one person continuously lead the team and at all times be available to the family whether the child is cared for at home or in the hospital.

6. PSYCHOSOMATIC CONDITIONS

If there is mention of the involvement of psychic factors in an illness this is referred to as a psychosomatic condition (Cruickshank, 1980: 382). According to Samuels (1981: 97) psychosomatic symptoms can be divided into three categories. The first type is hysterical traumatic reaction where, e.g., a child cannot move his arms or legs or even is blind or deaf. The child shows no signs of dismay about his symptoms. Hysterical neurosis also can be manifested as a loss of memory, different levels of consciousness and even multiple personalities. Even sleepwalking usually is found before adolescence.

The second type is caused by temporary bodily changes that are related to emotional states such as sadness, vomiting,

stomachaches, headaches and muscle aches. The condition can begin when a child was really ill. To prevent the symptoms from manifesting themselves, he avoids anxiety provoking situations (e.g., school phobia) or he gets more attention from his parents or doctors.

The third type is the so-called psychophysiological reaction. This also is caused or promoted by anxiety and tension but it leads to lasting physical changes in the body. Symptoms such as migraine, ulcers and asthma are examples of this condition.

7. SERIOUSLY MENTALLY HANDICAPPED

A person's intellectual potentialities to a large degree are genetically determined (See Chapter 3, section 3). A serious mental handicap (or **mental retardation**), however, in many cases is a result of external factors (see Muller, 1980).

According to Suran and Rizzo (1983: 332) most diagnoses of mental retardation are done when a child reaches school age. The reason for this is that a greater intellectual and social appeal is directed to the child by the school and then they fail. In pre-school only the most serious cases are recognized.

The causes of serious mental handicaps are varied in nature. Some major groupings of causes are discussed briefly below (see Suran and Rizzo, 1983; Gelfand et al., 1982; Schwartz and Johnson, 1981).

*** Infections and toxins**

The most widely known infection that can result in mental retardation certainly is rubella (German measles) when a mother gets it during the first three months of pregnancy. After birth encephalitis also can result in a serious mental handicap.

*** Traumas or physical injuries**

Birth injuries from the use of instruments, lack of oxygen and accidents where a child's brain has become damaged can lead to serious mental retardation.

*** Metabolic deviations and malnutrition**

Genetically determined metabolic deviations such as phenylketonuria (PKU) can lead to mental retardation if it is not diagnosed and the necessary treatment is provided before three months. The building up of enzymes can lead to brain damage. With a special diet the harm from this condition can be eliminated or limited. Thyroid malfunctioning also can lead to serious intellectual retardation. Here one thinks of cretinism.

* **Serious brain diseases**

Most brain diseases lead to some degree of mental handicap. Still, according to Suran and Rizzo (1983: 335) there are cases where serious brain damage is caused by diseases without a noticeable decrease in intellectual potential and its actualization. The relation between brain damage and intellectual potential is complicated and much research still needs to be done in this regard.

* **Chromosome deviations**

Down's syndrome or **mongolism** is the most familiar example of chromosomal deviations that lead to serious mental retardation. However, there are other chromosomal deviations that have mental retardation as a consequence such as the Cri du Chat syndrome that is one of the characteristics of microcephaly (Guide to genetic deviancies).

* **Problems during pregnancy**

A shortened pregnancy (less than 40 weeks) or babies with a low birth weight are viewed as high risk and who need highly specialized post-natal care. These babies are not necessarily mentally retarded but the appearance of such a handicap is greater for this group of babies.

* **Environmental influences**

Factors outside of a child's body that can lead to serious mental handicaps or can lead the child to give the appearance of mental retardation, such as psychosocial factors, in some cases are viewed as causal factors. Environmental deprivation that includes serious mental retardation of other members of the family (parents) is mentioned here.

* **Psychiatric deviations**

Psychoses such as **autism** usually are paired with serious mental retardation.

* **Unknown factors**

In many cases of serious mental handicaps the originating factors are unknown.

* **Teaching the mentally retarded child**

According to research reports five-sixths of all severely mentally retarded persons fall within the IQ interval of 51-65 (Suran and Rizzo, 1983; Gelfand et al., 1982). These children are educable and as adults can care for themselves to a relative degree. The remainder ranges from educable to total dependence on maintenance.

8. PSYCHOSES

8.1 Child schizophrenia

The diagnosis of **child schizophrenia** is still as controversial as the debate about the causes of psychoses. Knopf (1979) mentions that sometimes as many as 10 different diagnoses have been made of one child.

There are those who believe that an incongruity between parents and child, as well as intense educative disharmony are responsible for a child's psychic deviancy. Suran and Rizzo (1983: 507) refer to many research reports that indicate the contrary.

Researchers who support the theory that biological factors are the cause of schizophrenia base their conclusions on research showing that there were many problems experienced with the pregnancies, before, during and after birth, of mothers of babies later diagnosed as schizophrenic. It also has been found that these children have manifested so-called soft neurological problems (White, 1974). Suran and Rizzo (1983: 509) discuss research reports that accumulatively indicate that genetic factors also play a role in schizophrenia.

* Clinical picture

The clinical picture usually originates after a period of normal development. The children first show a picture of schizophrenia at approximately five years. They usually are sickly and poor motor functioning appears. They do not appear to be intellectually handicapped and often there is a family history of psychoses and hallucinations (see Knopf, 1979; Odendaal and Hersen, 1983).

Some of the symptoms that might appear include distorted interpersonal relationships; disorientation of his own body in space; inapplicable use of objects and a ritualistic bond with them; excessive fear for something that doesn't justify it and no fear for fear-provoking situations and objects; speech is used to communicate bizarre and meaningless contents; sometimes mutisms appear as do auditory hallucinations; inapplicable emotions; hyper- and hypo-activity; poor intellectual achievement with some islands of normal and even above normal intellectual penetration (e.g., high computational skills or memory for numbers) (see Schwartz and Johnson, 1981; Ross, 1980; Samuels, 1981; Knopf, 1979).

The symptoms of child schizophrenia correspond to what is found in adults and according to Suran and Rizzo the ratio of boys to girls is 2.5 : 1.

* Treatment procedures

Behavior modification programs are used to unlearn self-mutilating behaviors and to make language usage more applicable. Fair results are obtained with the help of medications. According to Knopf (1979) the prognosis is better if a child has a mastery of language. He also believes that intelligence is an indicator of the prognosis and because his intelligence is difficult to determine he speaks of an attained IQ score. If this score is above 70, the prognosis is better. According to him, less than 2% of the patients recover so that they can carry on a "normal" life and up to 25% show moderate recovery. In adulthood sometimes they will develop attacks similar to those of an epileptic.

The influence that a child with schizophrenia has on the family must not be underestimated. The parents often feel guilty and it is difficult to control their child's behavior.

According to Ross (1980) the mothers of schizophrenic children usually are anxious and tense and very involved with their children's problems. However, the behavior of these mothers is not viewed as a cause of their children's problems but rather is a consequence of them.

8.2 Autism

In 1943 Leo Kanner gave the first description of the clinical picture of **infantile autism**. Because particular parallels were found in the dynamics of educating these children, the theory of the "affectively cold mother" emerged. In 1964 with the publication of Rimland's research reports on possible biological causes, research in this regard gained momentum (see Suran and Rizzo, 1983: 513). Fein, Skoff and Mirsky (1981) published a report in which it was indicated that damage of the brainstem or brainstem dysfunction are possible causes of autism. Subsequent reports show deviant EEG's of autistic children (Knopf, 1979). The EEG's show a continuous state of arousal. The conclusion drawn from this is that the nervous system is functioning inadequately, but the cause is not known. According to Coleman et al. (1980) autism appears approximately four times more often in boys than in girls.

* Clinical picture

These babies sometimes are apathetic and in other cases they cry continually. They are not cuddled when held, do not reach out to another person (mother) and do not smile. They don't make eye contact with their mothers during feeding sessions and often have peculiar eating habits. For example, such children will only ingest food from a clear bottle or only eat solid food if it is formed into little cubes. They have no interest in the actions of others and do not pay attention to who leaves or enters the room. Defective speech appears. According to Knopf (1979) 50% of autistic children master speech well but don't use it as a means of communication. Those children who speak well usually speak in the third person. Immediate or delayed echolalia often appears.

Autistic children sometimes show an aversion for auditory stimulation and even cry when they hear their parents' voices. This phenomenon is not consistent; sometimes they are frightened by soft sounds but appear deaf to harsh sounds. They keep themselves busy by repeating movements such as banging their heads and

making spinning movements (e.g., spinning round objects) or rocking.

Other bizarre patterns of behavior sometimes appear like running in circles, sitting under a chair or cardboard box, or the child continually stacks the pieces of furniture in a room on top of each other. Some children continually make noises. They sometimes are very dexterous and can easily assemble a jigsaw puzzle but they experience problems in following the sequence of a picture story. Sometimes they show a strong attachment to objects or are preoccupied with them, e.g., a stone, keys, light-switches or round objects. The object is sometimes so large that it is disruptive (a large cardboard box).

The autistic child resists any change in routine. According to Coleman et al. (1980: 503 [in English]) they are "obsessed with the maintenance of sameness". They also say that an autistic child has a vague and undifferentiated self-concept and their self seemingly is not the point of reference in their world (absence of the I). In agreement with this, Knopf (1979) says that they confuse part and whole and that an autistic child might say that his head aches when another part of his body hurts.

Some autistic children have a good understanding of spoken language but do not use language themselves. It can happen that language development proceeds normally for a while and then the child loses the ability to master language as the autism emerges more into the foreground (see Schwartz and Johnson, 1981; Knopf, 1979; Suran and Rizzo, 1983).

*** Procedures for providing help**

Various approaches are recommended in the recent literature (see Coleman et al. 1980; Suran and Rizzo, 1983; Komoto et al., 1984). Some recommend an atmosphere of warmth, security and acceptance within which change is gradually introduced. Another approach is that of "structuring therapy" where the surroundings are so structured that spontaneous physical and verbal stimuli serve as games and the children's game playing makes them more aware of their body as a center of experiencing. Behavior modification programs generally are used to prevent a child from injuring himself and to learn basic language and social skills. According to Coleman et al. (1980) children who remain in their parental home progress

more quickly than those who are institutionalized. Today a parent is viewed as a "therapist", as a person who can bring about change in contrast to earlier times when he was viewed as the cause of the problem. Complete recovery to "normality" is not attained. According to Coleman et al., (1980) approximately 25% of the children who receive intensive help can engage in everyday life. In this regard, Komoto et al. (1984) indicate that persons who after help or therapy manifest relatively acceptable social behaviors show a conspicuous lack of sensitivity for the expectations, interests or feelings of others.

The differences between the symptoms of child schizophrenia and infantile autism are summarized as follows (see Schwartz and Johnson, 1981: 107; Suran and Rizzo, 1983: 517):

	AUTISM	SCHIZOPHRENIA
Beginning	At birth	After a period of normal development (2 to 11 years)
Health and appearance	Very healthy	"Grayish" sickly
Bodily attitude	Stiff and rigid if lifted	They enjoy holding tight if lifted
Resistance to change	Always resisting	Appears only in a few cases
Language	As they acquire language they don't use it to communicate; echolalia; speak in 3rd person; whole-part confusion	No whole-part confusion; no echolalia; don't speak in 3rd person. Bizarre thinking appears.
Affect	Inaccessible	Inappropriate affect shown; confusion
Hallucinations	None	Sometimes delusions and hallucinations appear

[Continued]	AUTISM	SCHIZOPHRENIA
Self orientation	Appear disoriented and unintegrated	Disorientation; confusion and anxiety appear
Receptive to behavior change	Very difficult to modify behavior	Behavior modification occurs easily
Motor skills	Very skilled; rocking and banging head appear	Poor motor skills; bizarre body movements; spins and rotates objects
Family history	Intelligent; emotionally stable	Average intelligence. History of illnesses and deviations
Unusual talent	For music; mechanics	Nothing specific

8.3 Borderline psychotic children

According to Gualtieri et al. (1983) the term **borderline psychosis** is used to describe children whose thinking in particular situations is unordered and/or irrational and difficult to understand. Nielson (1983: 28) describes [in English] the deviancy as " ... a structural disorder due to developmental arrest." According to him the critical time for the onset of this deviance is when distancing from the mother occurs (18 to 36 months and again with the onset of puberty). Others view this as a developmental problem or "ego defect" (Rubin, 1984: 7).

The symptoms of this deviancy are the following: they have a poor grip on reality and fall into a short-lived psychosis as soon as they experiences tension. They make use of psychotic and neurotic defense mechanisms and in play therapy they can quickly move between reality and fantasy. They are impulsive, unpredictable and emotionally unstable. Periods of uncontrolled irrational rage appear and sometimes there are manifestations of self-destructive anxiety. They can appear solitary and withdrawn and their self-image and identity of their **own I** is poorly developed (Gualtieri et al., 1983). According to the DSM III (American Psychiatric Association, 1980)

this deviancy can proceed to an identity disturbance after 18 years of age. Also language, attention, perceptual and motor problems often appear. However, there is great deal of uncertainty about this phenomenon.

9. CHILD ABUSE

Child abuse is condemned by society and its occurrence usually is kept secret by those involved. Reliable figures about its occurrence thus are not available but according to all indications child abuse is on the rise and indeed in all populations, beliefs and socio-economic groups, occupational levels, ages and levels of intelligence (Suran and Rizzo, 1983: 85).

The **abused** child's personal becoming is seriously restrained and usually he doesn't know that his parents act improperly and that he should report it to someone. Therefore, according to [Republic of South Africa] Law Number 74 of 1983 (article 42) any physician, dentist or nurses who ascertain child abuse must report the matter to the Department of Health Services and Welfare. The Department keeps a register of such reports and then refers cases of child abuse to the appropriate authorities (see Chapter 10, section 13).

Below some relevant moments of this phenomenon are referred to.

* Causes

According to Estroff et al. (1984) child abuse is brought about by a complex interaction among interpersonal and social determinants. Psychopathological characteristics of a father who abuses his children and even the "abnormal" personalities of both parents are mentioned as contributing factors (Estroff et al., 1984). A high incidence of parents who abuse their children were themselves abused as children. During their childhood they received little affective support, warmth and appreciation from their parents. Emotional immaturity of the parents, conflict in the family, the social isolation of the family, unemployment of the parents, parental ignorance of the normal behavior of children (children must not cry and easily go to sleep), and a change in the family structure (e.g., divorce) are mentioned as causes (see Suran and Rizzo, 1983; Gelfand et al., 1982; Samuels, 1981). There also is the standpoint that children who are abused have specific characteristics that make them vulnerable to abuse. Often such children had health problems

as a baby, e.g., premature babies, and ill babies who have a need for lots of attention. At school these children often also have learning problems (see Samuels, 1981: 114; Gelfand et al., 1982: 113; Sarafino and Armstrong, 1980: 213).

* **Educative dynamics**

The educative dynamics in which these families participate are of great importance. Herrenkohl et al. (1984) did a review of the research on this. Clearly there are more negative than positive characteristics present in family interactions. The parents initiate fewer contacts with their children than in normal families. Thus, there are fewer attempts at physical contact by both the parents and the children. The mothers withdraw themselves from their children even on a physical level and avoid such contact. Also there seems to be less verbal contact between the parents and the abused child. The child responds to this rejection by his parents with unacceptable behavior that in turn evokes negative behavior from his parents. The parent and child are caught firmly in an unfavorable circular dynamics where, seemingly, negative "reinforcement" maintains the behavior of both parties. The parent experiences himself as inadequate in his parenting role and rejects his child, who in his turn rejects the parent.

The children experience themselves as unloved, inadequate and aggressive and there is the danger that one day they will communicate with their own children in the same way. Thus, it should be possible to identify so-called "high-risk" families on the basis of an analysis of the dynamics of educating and, indeed, in terms of an analysis of the children's meanings and the dysfunctional actions that constitute the disharmonious educating occurring within the particular family.

The influences of these disharmonious dynamics of educating, in which the abused children have participated, on them as persons are observable in their behaviors which are manifestations of the abuse.

* **Consequences**

Above and beyond the externally perceivable signs of abuse such as malnutrition, burns, bruises or other injuries, according to Estroff et al., (1984: 649 [in English]) there is a " ... distorted affective communication." Characteristic of this is withdrawal, unhappiness,

sorrow and a lack of joyfulness. Sarafino and Armstrong (1980: 212) found that, in general, abused children cry very little but they cry excessively during a medical examination or treatment; they do not look to their parents for protection, they do not expect to be consoled; they are always suspicious of and do not trust adults in general. If a child is placed in foster care the major problem experienced is establishing a relationship of trust with the foster parents.

In the case of sexual assault and especially incest a difference in family dynamics is noticed.

*** Incestuous families**

According to the Child Care Union (Congress, March 1986) the cases most reported are those where a father/step-father molests the daughter. In approximately 50% of the cases the mother is aware of the abuse but for various reasons she pretends ignorance. For example, she is financially dependent on the father, perhaps was herself abused by her spouse, is affectively absent from the family or is promiscuous.

Often there is a role reversal between mother and daughter and they adopt each other's role. Sometimes the father has psychopathic characteristics or is psychosexually immature.

The victims of sexual molestation within the family usually are depressed, anxious and have sleep disturbances. They feel guilty and have a poor self-concept. Often they withdraw themselves from friends because they are "different". However, a daughter who is abused by her father sometimes views her position in the family, relative to the other children, as one of power and authority.

*** Intervention**

There was a time when all abused children who came under the care of professional persons were removed from the parents' care. Sarafino and Armstrong (1980: 214) indicate that the inclination today is to involve the whole family in getting help and to keep the family members with each other and help the parents change their behaviors. Gelfand et al. (1982: 114) recommend that in providing help an attempt be made to ease the pressure on the parents, for them to learn skills in dealing with children and in time of stress to

temporarily remove them even if this is only for a couple of hours a day. As a preventive measure they also say that a course in bringing up [educating] a child be offered at the high school level.

Help for the families also includes help for the children. Play therapy during which the children have the opportunity to play out what has happened to them is necessary. Especially in the case of sexual abuse the therapist must never try to give the impression that this was not so bad. The children must be encouraged to verbalize their feelings (see Adams-Tucker, 1984).

Each professional person who has anything to do with children who have been abused has the moral-ethical obligation to bring such families to the attention of the appropriate help giving institutions.

10. SYNTHESIS

In this chapter there is a synoptic consideration of some forms of child handicaps that an educational psychologist deals with.

It is seen that any **handicap** brings with it **aggravating** circumstances for the child and his parents, especially because the child, in his freedom to communicate with life contents in reality, is limited or often even is isolated. The primary threat of the handicap for a child is not to be "included" with those who live each day with him.

Because the handicapped child is under a great deal of restraint concerning his communication with reality, his doing things with others and his unfettered acquisition of experience, it is obvious that he also cannot differentiate out all of his **latent** potentialities very readily (see Chapter 3, section 3), and the parents especially have a particular guidance task of giving support to their handicapped child to allow his **latent** potentialities to be **available** to him via **teaching**. Further, the IQ scores have to be accepted with great caution because they are not really a reliable reflection of the handicapped child's intellectual potential.

The most effective way of communicating has to be found for authentically conversing with the parents so that their understanding and acceptance of, sympathetic demands of and unconditional love for their unique handicapped child can be manifested.

The educational psychologist necessarily is confronted with the task of offering the needed professional advice to the parents and even to teachers about how to deal with the individual handicapped child who shows deviations.

This especially obligates him to help the parents really learn to know their handicapped child so that there can be an unconditional expectation from their child to act as someone with his potentialities and limitations, without entertaining unrealistic expectations.

Early identification of the specific handicap is of cardinal importance especially before an incorrect label is applied to the child. In this connection, the historicity conversation (see Chapter 7, section 3.8) is of particular value for seeking out handicaps.

No parent is eager to have a handicapped child and many initially refuse to accept the fact. Such parents need to be helped perhaps to not be overindulgent in their disappointment or to be excessively absorbed in their handicapped child. In such cases the handicap readily becomes an educatively disharmonizing moment that also harms the family structure.

The handicapped child asks for "different" actions from his parents than his non-handicapped brothers and sisters. However, parents must guard against falling into an over-protective or too prescriptive approach, and when unacceptable behavior is manifested by the handicapped child the reason for it needs first to be sought outside of the handicap and then directly connected with it. Numerous research findings clearly have revealed that a handicapped child's deviant behaviors usually can be traced back to other causes than his handicap per se.

Clear guidelines need to be furnished the parents and other educators of the handicapped child regarding his unique needs and the parents' functional educative activities so that they will understand why their handicapped child may not be flattered, threatened or rejected and what it means to be lovingly involved in his authentic education.

The parents have to be advised about the correct placement of their handicapped child regarding special education after a particular

handicap has been confirmed by a physician or other specialized diagnoses.

The educational psychologist has to help the parents find the most suitable ways to communicate the educative contents to their child and also, in particular, their affective components. For example, regarding a hearing handicapped child opportunities for communicating are used that involve all of the other senses, in addition to vision. Regarding the blind, much more bodily contact is needed in relation to making use of his intact senses.

Many parents of handicapped children are uninformed about available resources. Parents especially need to be informed about the existence of toddler divisions at most schools for special education [in South Africa], where meaningful help can be provided to a young child at an early age. Linking a toddler up to such a division also offers the mother the opportunity to be involved in other motherly duties for part of the day instead of spending full-time only with her handicapped child.

The educational psychologist's primary task with respect to the handicapped child is to intervene with such a child pediterapeutically, if needed, but especially to guide the parents in establishing a relationship with their child. He has to advise the parents regarding decisions they must make regarding school placement and more but he may never force a decision on them. By presenting the implications of their child's particular handicap to them empathically-objectively, he has to inform them of the harmonious dynamics of the educative structures that are involve in their particular circumstances, and he has to be in a position to make a preliminary identification of the handicap and to follow this up with a correct referral for a comprehensive diagnosis by appropriately trained professionals (see Chapter 6, section 4).

11. REFERENCES

- Adams-Tucker, C. (1984). Learning disabilities: a complex phenomenon. **Reading Teacher**, 23.
- American Psychiatric Association (1980). **Diagnostic and statistical manual of mental disorders (DSM III)**. Washington, DC: APA.
- Coleman, J. C., Butcher, J. N. and Carsow, R. C. (1980). **Abnormal psychology and modern life**. Sixth Edition. Glennview: Scott Foresman.
- Cruickshank, W. M. (Ed.) (1980). **Psychology of exceptional children and youth**. Englewood Cliffs: Prentice-Hall.

- Estroff, J. W., Herrera, C., Gaines, R., Schaffer, D., Gould, M, and Green, A. H. (1984). Maternal psychopathology and perception of child behavior in psychiatrically referred and child maltreatment families. **Journal of the American Academy of Child Psychiatry**, 23 (6), 649-652.
- Fein, D., Skoff, B. and Mirsky, A. F. (1981). Clinical correlates of brainstem dysfunction in autistic children. **Journal of Autism and Developmental Disorders**, 11, 303-316.
- Furth, H. G. (1973). **Deafness and learning: A psychosocial approach**. Belmont: Wadsworth.
- Gadow, K. D. (1982). Problems with students on medication. **Exceptional Children**, 49 (1).
- Gelfand, D. M., Jenson, W. R., Drew, C. J. (1982). **Understanding child behavior disorders**. New York: Holt, Rinehart and Winston.
- Gualtieri, C. T., Kariath, U., and Van Bourgonden, M. E. (1983). Borderline children. **Journal of Autism and Developmental Disorders**, 13 (1), 67-72.
- Guarino, R. L. (1982). The education of handicapped children in private schools. **Exceptional Children**, 49 (3).
- Hallahan, D. P. and Kauffman, J. M. (1982). **Exceptional children: Introduction to special education**. Englewood Cliffs: Prentice Hall.
- Hare, B. A., Hammill, D. D. and Crandell, J. M. (1970). Auditory discrimination ability of visually limited children. **New Outlook for the Blind**, 64, 287-292.
- Herrenkohl, E. C., Herrenkohl, R. C., Toedter, L. and Yanushefski, A. M. (1984). Recent studies in child abuse. **Journal of the American Academy of Child Psychiatry**, 23 (6), 641-648.
- Jenkins, J. R., Speltz, M. L. and Odon, S. L. (1983). Integrating normal and handicapped preschoolers: effect on child development and social interaction. **Exceptional Children**, 52 (1).
- Johnson, M. S. and Kress, R. A. (1965). **Informal reading inventory**. Newark: International Reading Association.
- Johnson, R. C. and Medinnus, G. R. (1969). **Child psychology, behavior and development**. Second Edition. New York: John Wiley.
- Knopf, I. J. (1979). **Childhood psychopathology: A developmental approach**. Englewood Cliffs: Prentice Hall.
- Komoto, J., Usui, S. and Hirata, J. (1984). Infantile autism; An affective disorder. **Journal of Autism and Developmental Disorders**, 14 (1), 87.
- Meadow, K. P. (1975). Development of deaf children. In Hethrington, E. M. (Ed.) **Review of child development research**. Volume 5, University of Chicago Press.
- Morse, I. (1970). The goal of life enhancement for a fatally ill child. **Children**, 17, 63-68.
- Muller, F. J. (1980). **Ortopedagogiese riglyne vir 'n kurrikulumontwerp betreffende die geestelik-gestremde kind**. D. Ed. dissertation. Univeristy of Pretoria.
- Nel, B. F. (1955). **Die serebraalgestremde kind**. Pretoria: Van Schaik.
- Nielson, S. (1983). **Borderline and acting-out adolescents**. New York: Human Sciences Press.
- Ollendich, T. H. and Hersen, M. (Eds.) (1983). **Handbook of child psychopathology**. New York: Plenum Press.
- Piaget, J. (1951). **Play dreams and imitation in childhood**. New York: Norton.
- Raad vir Geesteswetenskaplike Navorsing (1981). **Verslag van die werkkomitee (7): Voorligting-Onderzoek na die onderwys**. Pretoria.
- Ross, A. O. (1980). **Psychological disorders of children**. Second Edition. Kagakusha: McGraw-Hill.

- Rubin, S. S., Lippman, J. and Goldberg-Hier, M. (1984). Borderline and neurotic children: What's the difference anyhow? **Child Psychiatry and Human Development**, 15 (1).
- Samuels, S. C. (1981). **Disturbed exceptional children: An integrated approach**. New York: Human Sciences Press.
- Sarafino, E. P. and Armstrong, J. W. (1980). **Child and adolescent development**. Glennview: Scott Foresman.
- Schwartz, S. and Johnson, J. H. (1981). **Psychopathology of childhood**. New York: Oxford Pergamon Press.
- Steyn, H. J. T. (1976). **Onderaktualisering van die psigiese lewe van die dowe kind-in-opvoeding: 'n Psigo-ortopedagogiese studie**. D. Ed. dissertation. University of Pretoria.
- Suran, B. G. and Rizzo, J. V. (1983). **Special children: An integrative approach**. Second Edition. Glennview: Scott, Foresman.
- Van der Merwe, S. W. (1983). **The object world of the partially sighted child as a world of meaning**. D. Ed. dissertation. University of Pretoria.
- White, J. H. (1974). Organic factors and psychophysiology in childhood schizophrenia. **Psychological Bulletin**, 81, 238-255.