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Date: November 30, 1973
HYPERACTIVE CHILDREN IN THE CLASSROOM

by

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A professional paper submitted to the Graduate Faculty in partial fulfillment of the requirements for the degree of

MASTER OF EDUCATION

with concentration in

Counseling

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Bozeman, Montana

December, 1973
ACKNOWLEDGEMENTS

A special thanks to my daughters Stacie Lee and Kelly Ann for their patience and understanding, to my parents for their constant support, to my brother and sisters and their families for their cooperation and help while in graduate school.

The author is especially grateful to Dr. Richard Horswill for the counseling, suggestions, encouragement, and understanding he has given me.
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ABSTRACT

The purpose of the research for this professional paper was to explore the literature available on hyperactivity. The purpose being to answer these questions. (1) What are the identifying characteristics of hyperactive children? (2) What are some techniques the teacher could use in management of the hyperactive child? (3) What are some procedures the teacher could use in teaching the hyperactive child?

The procedure used was to review available literature on the subject of hyperactivity. The review of literature was mainly limited to professional journals, reports and pamphlets concerning hyperactivity and related studies.

A widely accepted explanation of hyperactivity is that the control centers of the brain have not developed as rapidly as those brain centers controlling motor functions. Intelligence is often not impaired although emotional immaturity is common.

It has been estimated that one out of every three or four children is hyperactive. Hyperactivity is found in children of all socioeconomic groups and in countries throughout the world. Hyperactivity occurs in more male than female children, and in more first-born than later born children, and is most often diagnosed before the age of eight years.

Many different terms describe hyperactivity, but most refer to the excessive amount of movement or energy a child has as compared to the normal child.

Professionals in different disciplines are searching for the causes of, the origins of, and the treatment for hyperactivity. Many feel that hyperactivity originates before the child is born, during the birth process or is related to an infection or injury in early life.

Researchers indicate that results of intelligence tests given to hyperactive children may not necessarily be valid because of the active nature of hyperactive children during testing.

Most investigators feel that hyperactive children outgrow hyperactivity by the time they reach puberty. Others feel that hyperactivity diminishes or changes in nature but never disappears.

Many hyperactive children develop a poor self-image near the time of, or during puberty.

Teachers find that hyperactive children are problems in the classroom because of their hyperkinetic nature. If they can be managed, learning can take place, but it is difficult.

Identifying characteristics of the hyperactive child are: jumpiness, continual motion, aimless movement, "wound-up", irritable, frustrated, have poor social judgement, are kind, obliging, and eager to please.

Learning problems may be created because the child may have difficulty in speaking and hearing. Teachers need to work with parents, physicians and specialists to develop curriculums for the kinetic child.
CHAPTER I

Introduction

Introduction

In recent years many educators have realized that children with specific problems should receive as much attention and help with learning and adjustment as does the normal classroom student.

It has been estimated that there is about one hyperactive child in 25 in the classroom (Stewart, 1966). The hyperactive child is usually placed in the normal classroom setting. The classroom teacher's time which is filled with the normal teaching load and a classroom of active, normal children is pushed to the limits by having a hyperactive child placed in that classroom. It is generally known by the classroom teacher that the hyperactive student can create havoc in the classroom and place additional strains on the teacher's time and patience.

Statement of Problem

The problem of this study will be to identify selected procedures that may be used by the classroom teacher for managing hyperactive children in the classroom.

Purpose of the Study

The purpose of this study will be to gather together information concerning the hyperactive child and present to the teacher some management procedures that might be used to aid with controlling and teaching hyperactive children that have been placed in the classroom.
In many undergraduate teacher training programs, emphasis has been placed on how to best present the information being taught rather than on how to cope with children having special or specific problems.

Unless specializing in a specific learning area or training to work with a specific disability, the classroom teacher does not normally receive training in how to cope with special situations found in the classroom. The classroom teacher has the responsibility to teach all children placed in the classroom.

General Questions to be Answered

1. What are some identifying characteristics of the hyperactive child?

2. What are some techniques the teacher could use in management of the hyperactive child?

3. What are some procedures the teacher could use in teaching the hyperactive child?

General Procedure

The data for this professional paper was compiled through a review of literature written for and a review of literature that was available in the Montana State University Library, Bozeman.

Literature was written for from the Library of Congress and the Department of Health, Education and Welfare, Washington, D. C., and from the Department of Education at Eastern Montana College, Billings.
Pertinent materials were selected from professional journals as well as from hard bound publications.

Limitations of the Study

The researcher limited this study to that pertinent information found in the Montana State University Library, Bozeman, and to that information received from the Library of Congress and the Department of Health, Education and Welfare in Washington, D. C., and from the Department of Education, Eastern Montana College in Billings.

Definition of Terms

The terms to be used throughout this paper are defined as follows:

**hyperactive**: the word hyper is taken from the Greek prefix meaning above, excessive, or beyond (Taber, 1970); and the word active meaning productive of action or movement (Webster's, 1961). In this paper then, the word hyperactive will refer to excessive activity.

**hyperkinetic**: excessive amount of mobility (Taber, 1970).

**management techniques**: refers to the procedures presented in this paper that might be used by the classroom teacher in working with the hyperactive child so that activity might be controlled to the extent that learning will take place.

**teacher**: the classroom teacher with undergraduate training in elementary or secondary education but with little or no training in special education areas.
Minimal Brain Dysfunction: abbreviated as MBD, this will describe some forty or more terms used in professional literature to describe the group of behavioral/learning defects (MBD Compendium, Number 1, 1972) known as hyperactivity. Some of the more commonly used and known terms include: the Strauss Syndrome, the brain injured child, the hyperactive child, minimal brain injury, the brain damaged child, minimal brain damage, minimal neurologic handicap, the hyperkinetic child, dyslexia, chromic brain syndrome, the perceptually handicapped child, the perceptually disabled child, development imbalance, maturational lag, central nervous system dysfunction, neurophysiologic immaturity, the child with cognitive defects, choreiform syndrome (nervous affection marked by muscular twitching (Taber, 1970)), and minimal cerebral palsy.

MBD: abbreviation for minimal brain dysfunction.

Summary

School adjustment and learning can be a difficult process for every student. The classroom teacher's responsibility is to all students, including those with disabilities and special learning problems.

It is the hope of this researcher that this study will give the classroom teacher some insight into how the hyperactive child functions, and some management procedures that might be adapted to working with and teaching the hyperactive child.
CHAPTER II

Review of Literature

Introduction

What is hyperactivity? What causes hyperactivity? A number of theories have been advanced. The explanation most widely accepted at present, is that hyperactivity occurs when the control centers of the brain have not developed as rapidly as those centers that cause mechanical functioning. Intelligence is not impaired though emotional immaturity is common (Hyperactive Child, 1969).

Hyperactive children are not rare. Stewart (1970) estimated that one out of every three children is hyperkinetic. This syndrome is found in children of all socioeconomic groups and in countries throughout the world and more males than females are affected (Hyperactive Child, 1969).

When a physician uses the term hyperactivity, he is describing behavior relative to other children of the same age. To the parent, the term is used to describe behavior that often seems to demand excessive discipline in the home. To the teacher, a hyperactive child is one that creates problems in the classroom (Hyperactive Child, 1969).

Minimal Brain Dysfunction, or MBD, as it is abbreviated, is called a syndrome, but this may not necessarily be true because the separate elements identifying hyperactivity are not always present or they may not arise from a common abnormality.
The word syndrome is from the Greek syndrōmē meaning a running together, a complexus of symptoms. Complexus, a Latin term, means the total indications or phenomena of a diseased state (Taber, 1970).

Denhoff (1973) believes that the term hyperkinetic impulse disorder (H.I.D.) should replace all other terms used to represent the hyperkinetic behavior syndrome.

A number of different reactions may be observed in parents who are told of their child's difficulties arising from an abnormality of brain functioning (Erenberg, 1973).

Some are relieved that there are others who acknowledge the hyperactive problems they have faced during the development of their child. Some parents become angry and wonder why they have been singled out and faced with this type of child. Other parents may have inappropriate guilt and search for transgressions or errors that have brought about this situation. Some parents blame others, and often decide that the doctor is at fault. Another defense mechanism is denial. Parents then begin to question the competence of their doctor and to "shop" around for other doctors.

Whatever the initial parental reaction, communication must be continued over a long period so that the family can come to a better understanding of the problem and can channel its efforts to helping the hyperactive child most effectively (Erenberg, 1973).
Geneticists are seeking a genetic defect for hyperactivity. Biochemists are looking for an enzyme deficiency. Psychologists are banking on environmental factors, while child development specialists feel that nutritional defects create the problem. Neurologists feel hyperactivity is a result of perinatal insults.

Dr. J. Gerald Minskoff, of Southern Connecticut State College in New Haven (Weekley, 1972), has proposed a federally funded, multidisciplinary task force that will establish the nomenclature and designate the most promising research areas.

While many researchers feel that hyperactive children have some organic brain disorder, they may have spastic limbs or other signs of neurologic damage and still have intact intelligence and personality capacities that have not been affected by their brain damage.

MacKay (1973) has listed what she feels are the five most common causes of hyperkinesis in childhood. They are: (1) brain damage; (2) psychosis; (3) disordered environment; (4) reaction to enforced inactivity; and (5) cerebral dysfunction which includes developmental lags and maturational unevenness.

Chapman (1965) feels that hyperactivity may be caused by trauma to the head, intracranial infections, impairment of cerebral vascular supply, lack of oxygen to the brain, or from a variety of other causes. He feels that if organic brain damage is present in a person, personality disorders do not have to also be present.
According to Chapman, "Organic brain disorders are disturbances of brain physiology or structure which produces abnormalities in emotional functioning, thinking and behavior." Because of this, Chapman feels that each child should be evaluated interpersonally, emotionally and neurologically. The child should receive love, have definite limitations that are adhered to, and then be allowed to grow up.

At a meeting sponsored by the New York Academy of Sciences and the National Institute of Child Health and Human Development, educators said they feel it does not really matter what causes MBD (Weekley, 1972). These educators feel that the aim of the research should be to improve ways of handling children with MBD symptoms.

Hyperactivity is often referred to as hyperkinetic disease. "It represents an absence of control over one's self or a breakdown of control over one's behavior" (Wunderlich, 1969). "It is relative, with no tests to identify exactly when a child is hyperactive or when he is not."

In a study by Ernhart, Graham, et al, 1963, (Kessler, 1966) symptoms of hyperactivity were included in a clinical diagnosis of organic brain damaged children. An instrument of 209 items was administered to parents and examiners. Ratings were given to eight personality traits. There were significant differences between the brain injured children and the normal children in all examiner ratings -- except in "fearfulness" which did not differentiate in the two groups.
In the questionnaire's subscales, characteristics did not differentiate, except for "unpredictability". The subscales labeled "maladjustment" (i.e., inactivity, infantilism, negativism, compulsiveness and inwardness) showed significant differences.

The authors concluded that the hyperactive personality syndrome is not a typical picture, at least in a heterogeneous group of brain-injured children. Hyperactivity, impulsivity, and distractibility were more common in the brain injured group than in the normal group of children. Differences were significant only for the "Examiner Ratings", not for the "Parent Ratings".

According to a report given at a conference sponsored by the United States Office of Child Development and the United States Office of the Assistant Secretary for Health and Scientific Affairs (Report, 1971), a wide range of conditions and disabilities can interfere with a child's learning. These include his socialization with his peers and his capacity to reach maximum development.

Some of these difficulties can arise from a variety of defects, medical conditions and severe personality or emotional disturbances. One of these disturbances which has caused much concern and misunderstanding is known as minimal brain dysfunction. It has no known single cause.

Some symptoms may have their origin before the child is born, during the birth process or may be related to some infection or injury
in early life. Sometimes it is not possible to speculate as to original causes.

Hyperactivity can be classified as both sensory and motor. In sensory hyperactivity, the child is unable to refrain from reacting to stimuli within range of the sensory receptors of sight, sound, and touch. Motor hyperactivity may occur because of the short attention span. The child will soon examine every object in a room by touching, pulling, bending, twisting, opening or turning the object.

A study by Jenkins in 1969, used the computer to derive behavioral symptoms observed in 500 children. Parents described actions and these were recorded into many classifications.

Physicians who have worked extensively with these children seem convinced that on a clinical basis the root of the problem is physiological. They believe that distinct subcategories of MBD will be identified, treated, and preferably prevented (Weekley, 1972).

Motion studies cited by Dr. Herbert Birch, of the Albert Einstein College of Medicine, New York suggest that hyperactive children actually moved the same amount or less than their normal counterparts (Weekley, 1972), but their motions are more random so that on casual observation they seem to be more mobile.

Dr. Paul H. Wender, of the National Institute of Mental Health, proposes that hyperkinesis and a lessened capacity for experiencing pleasure and pain are primary disorders. Because of this, all other
symptoms such as social obtuseness or school failure are secondary (Weekley, 1972).

The hyperkinetic child responds rapidly to various aspects of, or stimuli from, the environment. He fails to screen out his response to competing stimuli which accounts for his aimless behavior.

Because the hyperactive child becomes disorganized at each new conflicting auditory and visual stimulus (MacKay, 1973), peer relationships are better on a one-to-one basis. If large groups of children are involved in a group game, the hyperactive child may become confused and try to take over the leadership of the group so that he may stay on top of the situation. If the hyperactive child tries to gain control, he might flounder because his central nervous system is not equipped to cope with this job due to the uneven maturation he is experiencing.

The hyperactive child may withdraw because of the confusion created if large groups of children are involved. Withdrawing may produce symptoms of anxiety, phobias, depression, and in extreme cases, regression (MacKay, 1973).

According to Erikson's (1963) developmental schema, the first stage of oral-sensory development, where the child learns a basic trust in the world around him, may go well.

In the second, or anal-muscular stage, where the child should develop a trust in his own body, the child with hyperactivity often gets
into trouble. In spite of the continuing mixed dominance (MacKay, 1973) the child with hyperactivity can become adept at running, jumping, skipping, climbing and bike riding. But, because of his difficulty in organizing around visual and auditory stimuli, these skills which could boost his ego, become deflating.

The hyperactive child's processing area does not react fast enough to stimuli to prevent him from falling, riding too fast, or jumping too high.

The third stage called the locomotor-genital one, where a child should develop trust as a male or female, will go poorly if already distrustful of his undifferentiated body. During this stage, the hyperactive child may be unable to handle the peer pressures created as puberty approaches.

An untreated MBD child may be severely handicapped in his educational and social development, and psychological maturation. In diagnosing and treating MBD, a multi-discipline approach is needed, with the ultimate responsibility for coordinating the varied resources devolving upon the primary care physician (MBD Compendium, No. 4, 1972).

Examination of the hyperactive child may involve one or more of the following professionals if a comprehensive exam is given: general medical examination, pediatric neurologic evaluation, psychiatric examination, psychologic evaluation, ophthalmologic evaluation, physiatric evaluation (including, if necessary, physical therapy and
occupational therapy evaluation), social service evaluation, educational evaluation, speech and hearing consultation, laboratory studies (including a complete blood count, urinalysis, appropriate blood chemistries, a skull series, and an electroencephalogram) and other medical or related evaluations as needed.

Dr. Benton, neuropsychologist of the University of Iowa, Iowa City, (Weekley, 1972) feels that one area neglected in MBD research is that of general mental competence which has been generally assumed to be normal or better. Dr. Benton believes that the intelligence quotient (IQ) of many MBD children, though within the normal range, is impaired relative to their siblings and parents.

Rabe (1971) found the most valuable, but not wholly reliable, predictive measure of future success for these children with MBD syndrome was the IQ. Most of the children with IQ's of 90 or more became self-supporting.

When the minimal brain dysfunction syndrome occurs, a careful diagnostic study is in order (Salk, 1973). The services of a psychologist who is familiar with the functions of the nervous system and who recognizes psychological tests as a sample of behavior to be interpreted in terms of all aspects of the patient's constitution is necessary.

While the Wechsler Intelligence Scale for Children has been used extensively as a diagnostic tool for children with central nervous
system dysfunction, this may not always be an accurate testing tool (Salk, 1973).

Because the test is generally given with the five verbal scales first, and the five performance scales afterwards, many hyperactive children tend to have difficulty. They tend to become tired and distractable, and their level of efficiency tends to decrease as the test continues (Salk, 1973). Thus the test scores during the performance areas are probably lower because of their distractability, not necessarily because of poor motor functions.

Children with minor neurological dysfunction resulting in disruptive behavior will face more rejection and critical comments from others and will have more difficulties adjusting to other people in general. They may begin to develop secondary emotional problems which show up as feelings of inferiority or rejection (Salk, 1973).

Although this is understandable, hyperactive children need to have their organic problems treated so that they might gain new perspective on themselves. It may take three to four months for a child with severe hyperactivity to gain a new self-concept after successful drug treatment (Salk, 1973).

More and more over the past ten years a constitutional hereditary, or physiological basis for behavior disorders has been considered possible with children who manifest symptoms such as disruptive behavior; acting out; aggressiveness; short attention span; hyperactivity
and sleep disturbances; inability to carry out instructions and difficulties with eye-hand coordination, reading, abstraction and conceptualization (Salk, 1973). During conventional methods of treatment, the unstructured situation seemed to facilitate more disorganized behavior.

Because hyperactivity is often discovered and diagnosed when the child enters nursery school or kindergarten or the first grade, symptoms will be described. This may help the classroom teacher identify the hyperactive child correctly. After identified, appropriate management techniques can be used to control the child so effective learning may take place.

Identifying Characteristics of Hyperactive Children

Early indications that a child is hyperactive may appear in infancy. Children who bang their heads and/or rock their cribs excessively may be hyperactive.

The hyperactive child may be querulous and difficult to manage. These babies may have tremors, be excessively jumpy, and over-react to light, noise and other stimuli, and have problems in feeding and sleeping. Persistence of these hyperactive symptoms beyond six months and into the first year is an important early diagnostic and prognostic feature (Denhoff, 1973).

As a toddler, the querulous child may become increasingly overactive and destructive as soon as he or she is able to walk. The
hyperactive child seems never to sleep. Several times during the night
the child might awaken to insist on food or drink, turn lights on and
off, and run through the house. Later on, teeth-grinding and temper
tantrums may be symptoms.

At home the hyperactive child seems to run when he should walk,
walks when he should run. The child may not be able to sit still
during mealtimes or for the bedtime stories that hold the interest of
other children.

Other toddlers may appear to drop the hyperactive symptoms
described above, only to have them reappear during the preschool years
when contained in the rigid structure of a formal nursery school or
kindergarten classroom.

It is felt that more boys than girls and more first-born than
later children are hyperactive (Hyperactive Child, 1969). These
children usually have normal or above-average intelligence and will
fluctuate from day to day in their personality characteristics
(Millichap, 1968). Many hyperactive children are constantly in motion
and have much aimless movement. They explore their environment, open
and close drawers, experiment with electric light plugs, take toys
apart, annoy their peers, and cling to adults. They also may be poor
listeners, have short attention spans, be hard to discipline, fidget
and squirm.
Parents describe hyperactive children as being constantly "wound-up" or in "perpetual motion." Hyperactivity is often accompanied by distractability, irritability, a low tolerance for frustration. The child may be quick to anger — in an explosive and unpredictable way. Despite their annoying characteristics, hyperactive children are usually kind, obliging, and eager to please (Hyperactive Child, 1969).

Hyperactive children often cannot dress themselves as easily as other children (Bakwin, 1967). These children usually have more difficulty in tying laces, fastening buttons, and closing zippers.

The hyperactive child often has poor judgement in social situations and in grasping the complexities of new problems. The hyperactive child will flounder, make bad choices, and will act impulsively when poor judgement causes difficulties in a situation.

The child may then become panicky, angry or aggressive. This unstable control of emotions can cause the child to easily become anxious, irritable, frightened and/or aggressive. Occasionally then, the hyperactive child is prone to antisocial acts such as destructiveness, evasive lying, stealing, sexual offences and impulsive aggressiveness.

Laufer (1973) adds bizarre behavioral patterns to the list of hyperactive characteristics.

Diagnosing 400 or more hyperactive children (MacKay, 1973) found a mixed dominance in most of them. They had a history of mixed left
and right handedness, eyedness, and footedness in the siblings and/or parents of at least 60%.

The hyperactive child in the classroom will have difficulty finishing work, and thus be unable to achieve his or her true ability. Perseveration and poor powers of concentration on the tasks presented may lead to frustration which triggers the explosive and hyperactive behavior. Scholastic performance is often poor, especially in arithmetic, reading, and writing.

Most symptoms are behavioral, with hyperactivity and school learning problems in the lead. These in turn may lead to adult and peer disapproval, which the child might react to by withdrawing or acting out. Failure or delay in language development, personality deviations, perceptual and perceptuomotor disabilities are also common. Children with minimal brain dysfunction tend to be labile and therefore relatively unresponsive to the ordinary application of reward and punishment.

Other hyperactive classifications of children are mischieviousness, inability to get along easily with peers, overdependency, and sometimes bashfulness (Weiner, 1970). The child is apt to talk incessantly, is socially immature and uninhibited (Wunderlich, 1967). Chapman (1965) identifies organic driveness as another characteristic.

Some hyperactive children have what is called the "soft neurological signs" (Weekley, 1973), which is a source of continuing debate
among the MBD specialists. Some soft neurological signs include clumsiness, impaired fine motor and visual-motor coordination and impaired balance. Some have electroencephalogram (EEG) abnormalities, and some do not. EEG is the electroencephalogram or brain writing patterns that are traced on an electroencephalograph machine (Taber, 1970).

Chapman (1965) feels that hyperactive persons showing brain damage may have spastic limbs, ataxia (slow, repeated, involuntary, purposeless, vermiform, muscular distortion involving part of a limb, toes, and fingers or almost the entire body (Taber, 1970)) and other signs of neurologic damage and still have intact intelligence and personality capacities.

Byrd (1973) described hyperactivity as occurring most frequently before the age of eight years. Millichap (1968) concurred, adding that hyperactivity decreases after the age of eight years, but that it still occurs up to the age of puberty.

The hyperactive child has trouble during puberty, either by accepting it or coping with it. Wunderlich (1969) feels much of the problem comes from a shallow self-concept.

Denhoff (1973) lists in order of clinical importance the characteristics of the hyperkinetic child. They are: (1) short attention span and poor powers of attention; (2) hyperactivity -- the child shows involuntary and constant movement and twitching; (3) impulsiveness and
inability to delay gratification. The child is unpredictable in intentions or actions and acts without thinking about the consequences; (4) perseveration — the child may stay on one task monotonously, unable to shift to other activities; and (5) variability, irritability, and explosiveness. These three characteristics are components of impulsiveness and are characterized by the wide fluctuations in behavior, low frustration tolerance, and intense explosive tantrums that occur without apparent reasons.

If two or more of the described characteristics are found in the hyperactive child, the parents and/or teachers may decide that the child is hyperactive (Levine, 1973) and want to employ one or more of the management techniques that are described next.

**Management of the Hyperactive Child**

The fact that MBD ranges from mild to severe in intensity and have ill-understood causes and outcomes should not obscure the necessity for skilled and special interventions. Several approaches now appear to be helpful (Hager, 1973). They are: (1) special classes and teachers can be directed to specific learning disabilities; (2) modification of behavior by systematic rewarding of desired actions has been reported useful; and (3) elimination of disturbing influences in the family or classroom through counseling may help.

Some suggestions made after a five-year study (Koppitz, 1968) of children with learning disabilities, including hyperactivity, include
the following points. First, public schools should make more allowances for individual differences between pupils and for the slower rate of maturation and academic progress of these children.

Second, learning disabilities have no single cause and no single cure. Most children with learning disabilities manifest a combination of minimal brain dysfunction or some type of central nervous system disorder and emotional and behavior problems.

Third, most children tend to have difficulties in school beginning with the primary grades.

Fourth, the emphasis in special education should be shifted from rehabilitation and the correction of learning and emotional disorders to the prevention of such problems, if this is at all possible.

Fifth, extremely immature and vulnerable children should be identified at the time of school entry and should be given special consideration before they develop serious learning and emotional problems.

Sixth, pupils should be grouped in special classes according to their functioning and needs, not on the basis of their IQ scores or their diagnostic labels.

Seventh, learning programs should be comprehensive, from kindergarten through grade twelve.

Eighth, placement of a child into a special class should not be considered permanent. As the child advances, he should be placed into
regular classes.

Ninth, special classes for the child with learning disabilities should be held in the regular school. Segregation of pupils should be kept to a minimum and pupils should be mixed with regular students whenever possible.

Tenth, special education teachers should be warm but firm, resourceful and flexible. They should have patience and a good sense of humor. Each teacher should be backed and supported by a team of professionals consisting of a principal, social worker, psychologist, language therapist and psychiatric consultant.

Eleventh, the program involving the learning disability student should involve the whole child, not just with his achievement.

Twelfth, the program should include after school recreational activities and summer programs.

Behavior modification procedures described in a report (Hanf, 1970) prepared for presentation at the Nashville Showcase of Innovative Treatment Programs in Child Mental Health, Nashville, seemed promising.

The author reports on the use of laboratory situations similar to parent-child interactions in the home as a means of training mothers to use behavior modification procedures to help cut down on or to eliminate poor behavior and to increase desirable behavior in their children.
Training sessions involve either modifying a single behavior, but include ranges of behavioral situations as well. Sessions occurred twice weekly over a two to three month range with 24 sessions maximum and an average of 15 sessions for each mother-child pair.

Outpatient situations included 18 mother-child pairs. The children ranged in ages from two to eight years, all were severely hyperactive and unmanageable and had one or more chronic, handicapping physical disability such as cerebral palsy, deafness, speech problems, or mental retardation.

Another study (Knowles, 1968) involving behavior modification showed success in correcting two major problems. The case involved a seven year old boy, with a Wechsler IQ of 116, who was repeating the first grade and had two major problems. He was extremely hyperactive and reversed letters when writing. On the basis of mental health consultations in use with behavior modification techniques the special education teacher eliminated both problems.

Teachers and/or parents might explain hyperactivity to other students in the classroom so that these students might better understand hyperactivity and perhaps be more willing to help the hyperactive child when the teacher is not free to do so.

Scoffing and sneering may be kept to a minimum if peers in the classroom of the hyperactive child understand what hyperactivity is and how they may help to keep tension and frustration to a minimum.
If the hyperactive child has a temper tantrum in the classroom, restrain him quietly but firmly. When his anger subsides, point out what he has done and offer comfort and soothing attention. Frequently you may find that he is ashamed for having lost control and needs your comfort and reassurance.

Anger is a normal and frequent by-product of hyperactivity; both in the child and in yourself. Be prepared. Expect the child to be frustrated and remember that his frustration level is abnormally low. Let this foreknowledge help you to handle his outbursts sympathetically, while keeping your own anger under control.

Check the classroom to see if its environment or organization can be improved to eliminate potential trouble spots of needless worry or friction. Fragile or valuable objects should be put away or out-of-reach so that the constant tension of the "don't touch" is avoided.

It is important to provide the hyperactive child with space for him to call his own or area enough for him to move around in. This will provide him with an area for activity and a feeling of importance.

The hyperactive child is usually more comfortable when on a fixed routine. If he can expect certain things to happen at certain times, he may learn to react to these fixed happenings and to adjust to them. Any change of events may be adjusted to easier by the hyperactive child if a forewarning and explanation of why the change is occurring is given.
Expected events also need explanations. Explain what will be done and then follow through with it. This may give the child an opportunity to understand what is happening so that he may react to the situation with less frustration.

The hyperactive child seems to need extra love and extra attention. He may not show it, or respond to it as you might feel he should, but it is important for the child to know that he or she is cared about (MacKay, 1973).

There are many ways in which you may help the hyperactive child to slow down. Your goal should be to eliminate as many frustrations as possible by helping to re-channel energies constructively.

Are you expecting too much from the hyperactive child? It is natural for parents and teachers to expect their children to excel, but perhaps your sights are prematurely high. Don't push. Relax, try not to be tense. A child is quick to sense impatience and your attitude or actions may aggravate his behavior.

Jenkins (1969) feels that strong, stable, and understanding home helps hyperactive children, but extra amounts of patience, repetition, firmness and consistency are needed by the parents as well as the teachers.

Touch control is a means that might work with the hyperactive child that is out of control. A warm embrace has been found to be of value as a means of calming the hyperkinetic child. It is important to
embrace the child in an all-encompassing movement that does not smother, but which also does not allow escape (Wunderlich, 1967). While the child is embraced and after the emotion or excitement of the moment has passed, go one to communicate about other matters. At first, long embraces may be necessary, thereafter the total embrace may be momentary. Thereafter, just a firm laying of the hand on the back of the child may be enough to quiet the child.

Another way to control the hyperactive child is to calmly and slowly but firmly, grasp the child, lift him, and lay him on the floor on his stomach. After the child understands this procedure, merely request the child to lie down in the prone position. Then place your hand firmly on the child's back and press down gently but firmly and steadily. It is a mistake to move the hand in jerky, patting, fidgety motions. With the other hand, calmly restrain any other body part which may be exhibiting fidgety movements.

The voice of the teacher is of great importance in managing the hyperactive child. The voice should be firm and unwavering; quiet, but not apologetic.

Teachers should see that the child is allowed to try different tasks. Success through effort will lead to motivation for other tasks that are difficult and frustrating.

The diagnostic team conducting an in-depth examination of a child suspected of being hyperactive might include the recommending physician,
pediatrician, neurologist, educator, psychologist, social worker, and speech and language therapist — all trained to recognize, treat and develop an appropriate individualized remedial and developmental program (MBD, No. 7, 1972).

Programs vary depending upon the hyperactive child. They might include one or more of the following: (1) remain in regular classes with or without supportive educational services; (2) resource rooms where the hyperactive child could receive instruction and remediation in specific subject areas; (3) assignment to a special class, receiving his entire academic curriculum in this setting. As strengths are developed the child is slowly integrated into a class with normal children; (4) special school placement, where entire program is designed to meet the child's specific needs; (5) home instruction provided for when the hyperactive child is unable to adjust to the school setting; and, (6) instruction in hospital, residential, or total care setting for the student requiring full-time medical and/or psychiatric care (MBD, No. 7, 1972).

Birch (1964) says that so little information concerning longitudinal studies is available on hyperactivity and treatment that it is most difficult to assess the value of methods used for the management of the syndrome of behavioral disturbance and owe their effectiveness to the time of life at which they are introduced.
Public concern over children using drugs to manage hyperactivity has been great during the last few years. One question that is frequently asked is does continued drug use produce toxicity? In the dosage used for children, the question of toxicity (the extent, quality or degree of being poisonous (Taber, 1970)) noted in the stimulant abuser is not a critical issue (Report, 1971). Unwanted mental or physical effects rarely appear in children; and when they do, cessation or adjustment of dosage quite readily solves the problem.

Another question frequently asked concerns the risk of drug dependency in later years. Physicians who care for children treated with stimulants note that they do not experience the pleasurable, subjective effects that would encourage misuse (Report, 1971).

Some sensible steps, in addition to medical control that might guard against drug misuse, should be used. The child should not be given sole responsibility for taking the medication. He usually should not bring the medication to school and the normal precautions concerning the medicine cabinet should be applied to prevent experimentation and over-dosage.

The public is often concerned with the prescribing of stimulants for children as creating a risk for other children. The prescribed dosage for an individual child constitutes an insufficient quantity to supply the confirmed abuser of stimulants with the amounts he requires. With sensible precautions, there is, at present (Report, 1971) no
evidence justifying sensational alarm about the safety of the individual child or of the general public.

Another question that is often asked concerning the child that is given drugs for control of his hyperactivity is does medication handicap the child emotionally. At present there is no evidence to suggest that treated children may not be able to learn normal responses and master adjustments to the stresses of everyday life.

Correctly diagnosed hyperactive children that are treated with medications, if this medication works at all, should be able to facilitate development of the ability to focus attention and make judgments in behavior. They usually can acquire the capacity to tolerate and master stress.

Physicians reporting (Report, 1971) suggest that parents should not be coerced to accept medical treatment. School staff should not directly diagnose the hyperkinetic disturbance or prescribe treatment. Stimulants or new medication used for hyperkinetic disorders should be promoted ethically and only through medical channels and through professionals qualified to deal with the problems of hyperactivity.

Hyperkinetic syndrome seems to occupy a unique position. It presents a significant behavioral picture which might be due to a physical cause and which might be treated by medications (Laufer, 1973). The same range of symptoms could be from an emotional origin or the situation may be further complicated in two ways. First, the
disruptive disorder of the hyperactive child may lead to secondary consequences such as school disruption and failure. These in turn may lead to withdrawal or delinquency.

Second, a child suffering from hyperkinetic impulse disorder can also have emotional disturbances entirely unrelated to organic causes but stemming from the usual psychopathological causes.

The Wechsler Intelligence Scale for Children can indicate current potential and levels of functioning but may also indicate a variety of discrepancies which may be of diagnostic significance (Lauder, 1973). Tests, such as the Bender-Gestalt, can give a more detailed view of visual-perceptual, visual-motor, and figure-background difficulties. Projective testing as in the Rorschach and the Thematic Apperception can elicit both organic signs and primary and secondary emotional components.

The above mentioned tests are useful, but they are particularly so if combined with a great deal of clinical experience and an open mind (Laufer, 1973).

These things may not help. Some symptoms of hyperactivity are so severe that skilled clinicians undertake a trial of medical treatment. Medicine does not "cure" the condition, but the child may become more accessible to educational and counseling efforts. Over the short term and at a critical age, this can provide the help needed.
Some studies of drug use on hyperactive children will be presented. From these the teacher might better understand what may happen to the hyperactive child on drugs.

Physicians may prescribe one of two types of drugs. It is likely that the drug prescribed might be a member of the tranquilizer group of drugs, or a member of the stimulating group of drugs. Some hyperactive children respond best to one type; others respond better to the other.

Tranquilizing drugs tend to slow down the hyperactive child and make him more manageable. In addition, they may help a child control his emotions.

Stimulating drugs, such as the amphetamines, are currently the most frequently prescribed agents for the hyperactive child -- both as treatment and as an aid in diagnosis (Hyperactive Child, 1969).

It is believed that in the hyperactive child the control centers in the brain have not developed as rapidly as the motor centers. So by stimulating the control centers, these drugs enable the child to have more control over his behavior and therefore to function more normally.

As a rule, the hyperactive child will respond to drug therapy within a few days. Approximately half (Wunderlich, 1967) to two-thirds (Report, 1971) of all hyperkinetic children will respond to drug management. If no improvement is noted in two or three days, the
parents of the hyperactive child receiving drugs should call the physician prescribing the drugs so that an adjustment might be made in drug dosage.

Stimulant drugs have been used successfully to treat hyperactive children for over thirty years. They are considered the first and least complicated of the medicines to be tried (Report, 1971). This experience has shown no tendency toward habituation or addiction in children.

Amphetamines commonly used to treat hyperactive children are Benzedrine, Dexedrine, and Ritalin. Although these drugs have a stimulating effect on adults, medical experience and research reveal that they have a reverse effect in hyperkinetic children and tend to counteract the overt symptoms characterizing hyperactivity (Hager, 1973).

Occasionally, a few children taking stimulant drugs may develop a pale, anxious expression. However, the most common side effects are insomnia and reduced appetite. These are not usually a problem if the drug is given just before breakfast and before lunch. Hyperactive children usually tolerate stimulating drugs better than adults (Hyperactive Child, 1969).

Erenberg (1973) lists some tranquilizers, antidepressants, and anticonvulsants that are commonly used for the smaller groups of hyperactive children not successfully treated by the stimulants.

These drugs include: diphenhydramine (Benadryl); hydroxyzine
(Atarax, Vistaril); diazepam (Valium); chlordiazepoxide (Librium); haloperidol (Haldol); trifluoperazine (Stelazine); trifluoperazine (Stelazine); imipramine (Tofranil); and amitriptyline (Elavil). The major tranquilizer used as medication is phenothiazines which includes chlorpromazine (Thorazine) and thioridazine (Mellaril) which have been used extensively and found to be helpful to a significant degree.

The use of phenobarbital is to be avoided since it frequently worsens behavior (Erenberg, 1973). These drugs have the effect of diluting the strengths of the hyperactive child's emotions and thus assist the child in combating temper tantrums, destructiveness and other emotional outbursts (Hager, 1973).

When medication is effective, the child can modulate and organize his activities in the direction he wishes. The stimulant does not slow down or suppress his initiative, nor does it make him feel high, over-stimulated or out of touch with his environment. The hoped-for secondary consequences are better peer relationships, improved self-image, and pleasure in acquiring competencies.

Dosages may require readjusting to minimize unwanted effects. The major ones being loss of appetite and insomnia. Drug treatment should and need not be indefinite and usually is stopped after age 11 and 12. Frequently drugs may be discontinued during a vacation period. Drug free intervals can be prolonged as observers assess the child's condition.
Two doctors (Millichap, 1968) and their research associates of the Children's Memorial Hospital and the North West Medical School in Chicago report a double blind study of thirty children of average intelligence who were hyperactive, with learning disorders and having slight brain damage. The children ranged in ages from five years to 14 years, with the average age of eight years.

Neurologic signs of minimal brain dysfunctions were found in all but one of these children. A history of brain damage was found in 17 of the children. A lack of oxygen during birth was found in seven of these children, birth complications were noted in three of these children while toxemia or hemorrhaging was noted in three of the mothers of these children. A family history of hyperactivity, speech and reading problems, or of epilepsy was recorded for eleven of the children in the study.

In this double blind (code used so that neither the researcher or the child knew who was receiving the drug), placebo-controlled study, the results were measured by a battery of neuro-psychological tests that assessed the motor activity, coordination, visual-motor and auditory perception, general intelligence, conduct and personality of the children in the study.

Each child received either the drug or the placebo for a period of three weeks. Tests were done both before and after each course of treatment.
Significant and beneficial gains from the drug were found only in the Draw-a-Man and Frostig-Figure ground perception tests.

In short-term treatment of hyperactive kids with Ritalin, small gains were made in tests of general intelligence and visual-motor perception, but it was concluded by investigators that management of learning disorders with Ritalin and other drugs must await long-term controlled studies, for this investigation did not produce specific and significant benefits.

The investigators felt that unless such proof is forthcoming the authors discourage use of drugs in remedial methods of education.

Another study (Nichamin, 1968) involving the drug Ritalin (Methylphenidate) was done with 100 children with learning disorders. A physician at the Children's Hospital in Michigan and a professor of psychology at Wayne State University wanted to see how the hyperactive child and his counterpart the lethargic child with sluggish thinking would react to Ritalin. They found that both groups of these children exhibited motor restlessness, impulsive behavior and were easily distracted from perceiving and thinking.

In this study, treatment was limited to use of one drug and psychological support for the patient and family. The children and the families involved in the study were studied (it did not say how) in advance to determine those who would not be appropriate for this kind of drug treatment. The drug was given to those selected both in
the morning and at noon.

The investigators concluded that the use of Ritalin for a variety of school and behavior disorders without careful diagnosis should be shortsighted and inappropriate. Early diagnosis and treatment can help prevent serious patterns of desperation and defeat as well as evaluation of a sense of inferiority, according to the authors.

In conclusion, the investigators feel that for certain children treatment with Ritalin produces constructive changes in learning and emotional adjustment both at home and at school.

Once the teacher and/or the parent has found the management technique that best suits the hyperactive child in the classroom, learning may then begin to take place.

Procedures for Teachers to Use with Hyperactive Children

After complete and thorough diagnosis of the hyperactive child, an overall treatment plan must include counseling with the parents, the teacher, and the child (if old enough), as well as finding suitable programs that can meet the child's special needs (Erenberg, 1973). The physician should outline the nature of the child's difficulties, the child's assets and liabilities, and an explanation of possible treatment (Erenberg, 1973).

As a teacher, plan to spend some time with the parents of the hyperactive child. If your school has a school counselor or school psychologist, meet as a group with the child's parents. When you meet
listen and then ask for the parents recommendations. The physician of the hyperactive child should also be included. If his time is limited, ask the parents for the advice he has given them concerning the child and then follow through with a similar routine if at all possible.

If management problems are used at the child's home, follow them in the classroom if at all possible. Consistent behavior by the parents and the teacher will provide a more stable constant atmosphere of discipline for the child to expect and to follow.

Barbara D. Bateman, Ph.D., University of Oregon in Eugene feels that there needs to be a continual assessment of the child’s educational progress and areas of need. She says that the MBD label stigmatizes the child and provides a pseudo-sophisticated excuse for nonteaching. All educators need to know is where to begin instruction, what specific tasks need to be taught and how performance changes with the instruction the student is given.

One of the major problems with the hyperactive child is in the educational field (Salk, 1973). Many schools recognize the hyperactive child's difficulties but fail to accept the limitations of the hyperactive child. Educators may try to force the hyperactive child to function more effectively in areas where they are incapable of functioning, and this tends to enhance feelings of inadequacy.

Some techniques the teacher might use if hyperactive children are in the class you are teaching are: slight modification of the
curriculum, slight modification of management, more personal attention, slower paces of teaching, fewer explicit requirements, allowing repetition of one or more grades during the elementary years, waiting until the child is seven years old before starting school, having the child go to a summer school where subjects can be caught up on or more individualized help can be given.

Many hyperactive children are unable to learn through visual retention, but seem to do well with a teacher who talks a lot and explains things well (Salk, 1973).

Many hyperactive children are very creative, imaginative, and can express their thoughts and ideas by talking into a tape recorder. "Talking" their lessons might enable them to become less frustrated than by the slower method of expressing themselves through the process of writing.

Teachers and parents may help the hyperactive child with more successes if generalizations and abstractions are avoided. Give simple instructions (Salk, 1973). For example, the instruction to "get me a glass of water" will often lead to failure. However, if the child is told, "Go to the kitchen, take a glass from the cupboard, put the glass under the faucet, turn on the faucet and when the glass is filled turn off the faucet, and bring the filled glass to me," the child will more than likely succeed.

If the hyperactive child has been dismissed from school for a short
If the hyperactive child has been dismissed from school for a short period of time, it is best to reenter the child with a different group, if at all possible (Hyperactive Child, 1969). Assure him that you know he is trying and give him as much sincere praise and attention as possible.

Local child guidance clinics or mental health centers will offer help. The child's physician or the school nurse may also give advice concerning the hyperactive child you are working with.

Teachers may write to the National Association of Mental Health, 10 Columbus Circle, New York, NY 10019, or to the Department of Health, Education and Welfare, Washington, D. C. 20201, for help and advice concerning hyperactive children.

Books (Siegel, 1961) and pamphlets for parents and teachers are also available from the National Easter Seal Society.

The hyperactive child's future is a good one. Close, yet relaxed supervision on the part of the parent, teacher, and physician is important. It will help channel and direct the resources of the hyperactive child and provide suitable outlets for his excess energy until he is able to assume responsibility for his actions.

Some do's and don'ts to remember when working with hyperactive children. Don't push the hyperactive child beyond his capability. Do follow a regime and program his activities so that he usually knows what to expect and when to expect it. Build his confidence by giving
ample time — and praise, praise, praise — for things he seems to do particularly well (Hyperactive Child, 1969).

Don't be overly solicitous. Encourage the hyperactive child to be a participating member of the classroom to the extent that he is able, not an "it" sitting on the sidelines.

Do give adequate warning if a major change in the classroom routine is required, especially if it is a favorite or well-achieved in activity.

Don't panic in the face of disruptive behavior. Try to keep calm and on top of the situation.

Avoid constant nagging. Be willing to overlook small breaches of discipline so that you can concentrate on the big problems. If you are normally a somewhat energetic person, try to slow down a bit when working with the hyperactive child. If you are less active, he will be less active.

Don't let other children in the classroom feel that the hyperactive child gets all the attention. On the other hand, give the hyperactive child a little more than average amounts of attention.

Don't feel that you are the only teacher with hyperactive children in your class. Other teachers may be able to give you suggestions concerning working with and teaching the hyperactive child.

Individualized instruction in a resource room is beneficial. Team teaching, open classrooms, taped textbooks, less crowded rooms and
and desks that are not tightly grouped together are usually less frustrating.

Instructors have found that pairing a hyperactive child with a peer who can serve as a model and is willing to help the MBD child when the teacher is not immediately available is helpful.

Teachers should explain to students' in the classroom about hyperactivity. A book for children (Garner, 1966) can be ordered that will help explain what minimal brain dysfunction is.

To deny any problem or to avoid talking about it may result in the child's thinking that he has a far worse illness, perhaps too terrible to talk about. The general rule of openness and honesty should extend to classmates of the hyperactive child.

Teachers should attempt to transmit attitudes of acceptance of the child, understanding tolerance of his or her deficits, and the expectation that the child will participate in school activities in areas he or she can handle competently.

Explain acceptable and unacceptable behavior clearly and follow it. Clear and firm limits should be provided in the classroom and should be promptly enforced.

If possible, parents and teachers should be uniform in their discipline so that there is no uncertainty as to what to expect on the child's part (Wunderlich, 1967). Since many hyperactive children have poor time concepts (Erenberg, 1973) and are forgetful, delaying
punishment makes it meaningless. The hyperactive child may not respond to the usual methods of discipline which are successful with other children. At home, one helpful method (Erenberg, 1973) is to isolate the child temporarily, ideally in his or her own room, furnished along simple lines. In school, a special area, such as a resource room allows the child to regain his or her control in a room that is not stimulating and emotion-charged.

Keeping the child isolated for too long (Erenberg, 1973) may be a mistake as the excess of enforced inactivity may then "charge him up" again.

Whenever possible, situations which are unfamiliar, noisy, stimulating and/or sedentary for long periods should be avoided.

Hyperactive children have difficulty judging and appraising situations. Useful habits should be stressed so that the reflex reactions to a situation will be socially acceptable ones.

Most activities are better taught by repeated demonstrations than by verbal instructions (Erenberg, 1973). Complicated tasks should be broken down into parts and the parts taught one at a time.

Common among hyperactive children is a seeming lack of fear and a lack of recognition of dangerous situations (Eronberg, 1973). For this reason, some situations must be stressed as being avoided. For example, crossing the street at a crossing without supervision.

In general, traditional forms of psychotherapy have not been found
to be effective in treating the primary symptoms of the hyperactive child (Chess, 1960; Eisenberg, 1961). Among older children psychotherapy or counseling may be indicated for the secondary problems of frustration, poor self-image and particular defense and adaptational mechanisms. Contact the physician for specific techniques that might be used with the specific hyperactive child you are treating.

Educators seem to feel there is a delay or failure in language development, personality deviation, perceptual disability and perceptuomotor disability. One or more of these characteristics usually show up in school activities if they have not done so before (Wunderlich, 1967). Areas of learning difficulty include areas of motor activity.

The quality of the activity is more characteristic than the quantity of activity in the hyperactive child (Rabe, 1971). Motor symptoms include mild spasticity of gain, abnormality of tongue movements.

Because clumsiness occurs in children with MBD in combination with learning difficulties, it is frequent practice to subject these children to special physical exercise on the assumption that improvement in motor skills will lead to improvement in learning abilities. Attempts to document the effect of these endeavors are few, and no conclusive evidence is available to encourage this practice in children (Rabe, 1972). Sensory-motor training or systematic exercise should have a specific goal, should be simple and rational. One goal might be the
child's ability to participate in play activities. Physical education activities in gym can help to develop motor coordination and skills.

The play activities that are best for the hyperactive child will depend upon the age and degree of activeness of the child. The most important factor in any activity is that it must hold his attention and usually this will require the help of another person. Supervision means that you care about him. The hyperactive child needs to know this. Non-competitive skills and activities that require little concentration are necessary to this child.

If a hyperactive child moves about erratically, bumping into chairs, tables, walls, dropping things on the floor and goes in an opposite direction when called, then the physical education teacher and the special teacher should map out a planned program for gross motor training. Each task is divided into consecutive step-by-step parts through which the child progresses. Remember, praise for successful completion of each task. Things you might have the child do are to point to various parts of his body, imitate the movements of the teacher, play angels-in-the-snow, hop and skip.

Hyperactive children usually have good coordination and learn physical activities faster than other children (Rabe, 1972). Swimming and other non-competitive sports provide an excellent way of letting him throw off steam. Hyperactivity provides competition within the child himself. Group activities where the child has to wait his turn
or where large groups of children are involved have a tendency to over-
stimulate him. Games where smaller groups are involved are better
because the hyperactive child can participate more often.

The hyperactive child becomes bored very easily. Games or
activities that have numerous variations are particularly good for the
hyperactive child.

Games that are good would include ball games. The larger the ball
the easier it is for the hyperactive child to handle.

If necessary, the MBD child should be given ancillary reading and/
or speech therapy.

If the hyperactive child has auditory difficulty, the first step
is to determine if the child can hear. If the child can hear, he may
not be able to interpret the sounds heard or be able to sort out the
sounds heard and associate them with objects or experiences.

The primary object is to help the hyperactive child to utilize
the auditory capacities he has. Begin by developing an awareness of
sound. Differences in pitch, quality and intensity will help the
child to hear differences in sound. Poor hearing (MBD, No. 7, 1972)
has a direct relationship to the development of articulation disorders
leading to poor speech.

The hyperactive child may have difficulty in none or one or more
of the following areas which may impede their ability to read. These
are left–right orientation; time orientation; body image; writing;
spelling; topographic disorders; motor coordination; auditory discrimination; auditory memory; articulation; reversal of words, syllables, or letters; speech; sound blending; visual memory; and visual discrimination.

The teacher's, with the aid of specialists, if necessary, diagnosing of the child's strengths, weaknesses, and gaps are most important. A program should then be developed around these areas. As with other areas the skills run from the simple to the complex in reading. These are: (1) locate answers, (2) follow a sequence, (3) grasp a main idea, (4) note details, (5) determine organization, (6) follow directions, (7) read critically, and (8) organize and summarize (MBD, No. 7, 1972).

It should be noted that visual expressive language, or writing, is the highest level of verbal symbolic behavior (MBD, No. 7, 1972). The child that is unable to decode and develop his ability to read most likely will be unable to spell or put his thoughts into sequential patterns.

The hyperactive child having problems with mathematics may be lacking in one or two areas. Mathematics deals with both numbers and with quantitative thinking, particularly relationships of quantity, space, form, distance, order, and time. Normal children develop an inner mathematical language as they play with blocks, puzzles, beads, formboards, and so on. They assimilate and integrate nonverbal
experiences and then learn to associate numerical symbols with experience, and then to finally express ideas of quantity, space and order by using the language of mathematics.

In remedial work in mathematics, it is necessary to separate children who fail in arithmetic because of language and reading problems from those who have disturbances in quantitative thinking. After the nature of the deficit is determined, then remediation should be improved before difficulties in quantitative thinking are dealt with (MBD, No. 7, 1972).

Pictures may be used to help the hyperactive child relate real objects to basic issues. Pictures may represent one object, multiple objects, people or action scenes.

Many hyperactive children have not developed a conscious perception of their own bodies. Drawing life-size pictures of the child and then sketching in the parts of the body, clothing, and other features may help bring the body into focus. Large mirrors, games, puzzles with large, thick pieces, and exercises may be used to show and experience body parts and functions.

A combination of one or more of the listed procedures may be helpful to the teacher who is working with the hyperactive child.
CHAPTER III

Summary and Conclusions

Summary

The purpose of the research for this professional paper was to explore the literature available on hyperactivity. The author wanted to know more about hyperactivity, what it was, what causes it, and why does it occur. How can hyperactivity be identified by a teacher that has a roomful of children and how does she manage that child so that meaningful learning can take place?

The procedure used was to review the literature available on hyperactivity that might answer some of the questions posed above. It is hoped that a classroom teacher might be able to read this paper and receive ideas and/or suggestions that would benefit both the child and the teacher involved with hyperactivity.

The review of literature was mainly limited to professional journals, reports and pamphlets concerning hyperactivity and related studies.

A widely accepted explanation of hyperactivity is that the control centers of the brain have not developed as rapidly as those brain centers controlling motor functions. Intelligence is often not impaired although emotional immaturity is common.

It has been estimated that one out of every three or four children is hyperactive. Hyperactivity is found in children of all socioeconomic groups and in countries throughout the world.
Hyperactivity occurs in more male than female children, and in more first-born than later born children, and most often is diagnosed before the age of eight years.

Many different names describe hyperactivity, but they all refer to the excessive amount of movement or energy a child has as compared to the normal child.

Professionals in different disciplines are searching for the cause of hyperactivity in their area. Some speculate that the origin of hyperactivity is before the child is born, during the birth process or related to an infection or injury in early life.

Studies indicated that the characteristics of hyperactive children are so varied in description, and range from mild to severe that a definite set of "symptoms" cannot be established.

Professional researchers tend to feel that hyperactivity will be identified, treated, and hopefully prevented as investigations in disciplines uncover more information relating to hyperactivity.

In the literature reviewed, researchers indicated that results of intelligence tests given to hyperactive children may not necessarily be valid because of the active nature of hyperactive children during testing.

Most investigators seem to feel that hyperactive children outgrow hyperactivity by the time they reach puberty. Others feel that hyperactivity diminishes or changes in nature but never disappears.
Hyperactivity is often first diagnosed as the child develops problems in the classroom. The teacher finds that the hyperactive child creates disturbances, is hard to manage, and difficult to teach.

Some identifying characteristics of the hyperactive child are: excessively jumpy, in continual motion, have much aimless movement, constantly "wound-up", irritable, have a low tolerance for frustration, have poor social judgement, are usually kind, obliging, and eager to please.

Many hyperactive children have a mixed dominance in handedness, eyedness, and footedness as do their parents and/or siblings.

The hyperactive child in the classroom may often have difficulty in speaking and hearing. As a result the child develops learning problems in reading, arithmetic, and writing. The child may often excel in physical education activities.

Management of the hyperactive child must take place before learning takes place. Persons involved with the training of hyperactive persons should be consistent, firm, but constant in their discipline. Discipline should, if at all possible, be uniform at home and at school.

Drug use for the hyperactive child is a moral and ethical issue. Two types of drugs used to control hyperactive children are the tranquilizers and the stimulents. Tranquilizing drugs are used to slow down the hyperactive child to make him more manageable; while
stimulating drugs are used to stimulate the control centers in the brain. This may enable the child to have more control over his behavior and therefore function more normally.

Drug treatment is effective in approximately one-half to two-thirds of the hyperactive children treated.

Teachers need to involve all the specialists necessary to plan a school program for the hyperactive child. This program should involve the physical, mental, emotional and learning areas necessary for a "total" growth pattern.

Extra attention to classroom furnishings and arrangements, management of students, curriculum planning, and teaching techniques are necessary on the part of a teacher if a classroom has a hyperactive child as one of its students.

Conclusions

After presenting this review of literature on hyperactivity, the author has arrived at the following conclusions:

1) No two hyperactive children are alike in their emotional, behavioral, or mental make-up.

2) The use of drugs to control hyperactive children's behavior is an ethical and moral issue.

3) Drugs used to control hyperactive children's behavior is still on an experimental basis. There is no known or specific treatment to follow. Parents and physicians need to communicate often to determine
if the drug treatment is working as it should to control the hyperactive child.

4) Teachers need to work closely with the parents of the hyperactive child, the child's doctor, and the specialists that are trained to work with the areas of learning problems that the child has. The continual assessment of the child is necessary by these people to achieve and maintain a "well-rounded" school program to help the hyperactive child develop his or her full capabilities.

5) Hyperactive children often develop self-image problems shortly before, or during puberty.

6) The characteristics of hyperactive children are seldom the same in any two children and they range from mild to severe in intensity. No known cause is known for their origin.

7) Teachers having hyperactive children in a training situation should provide a well-organized, uncluttered, stable classroom atmosphere. Extra amounts of attention and praise need to be given to the hyperactive child.

8) Even after the research is completed, investigators are not sure of what has been accomplished to help prevent or treat or diagnose hyperactivity.
CHAPTER IV
RECOMMENDATIONS

After the investigation of available literature, the author recommends the following:

1) With the information available that one out of every three or four children are hyperactive, teacher training institutions should include in their teacher training courses, information concerning the management, control and teaching procedures that might be beneficial in working with the hyperactive child.

2) Teachers need to work closely with parents, physicians and diagnostic personnel in determining an educational program that will help develop the "total" child.

3) In-service training programs need to be developed for teachers that are presently active in the teaching field and that might have hyperactive children now, or in the future, in their classrooms.

4) More research as to what teaching techniques are most beneficial to the hyperactive child.

5) More coordinated research and investigations by a multi-disciplinary task force of professionals to determine the causes of, the treatments for, and the prevention of, hyperactivity.

6) Diagnostic teams should be established that would travel to schools requesting help in diagnosing the hyperactive child. These diagnostic teams would give recommendations for developing a program for the hyperactive child, and provide information to help the teacher
overcome or cope with the hyperactive child so that meaningful learning by that hyperactive child might take place.
SELECTED REFERENCES


Chess, S. Diagnosis and treatment of the hyperactive child. New York State Journal of Medicine, 1960, 60, 2, 379.


