Educating the hyperactive child: a multi-disciplinary view of assessment and therapy

Richard R. Waski
EDUCATING THE HYPERACTIVE CHILD: A MULTI-DISCIPLINARY VIEW
OF ASSESSMENT AND THERAPY

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by
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SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
MASTER OF ARTS IN EDUCATION
(EDUCATION OF LEARNING DISABLED)

At the Cardinal Stritch College

Milwaukee, Wisconsin
1974
This research paper has been approved for the Graduate Committee of the Cardinal Stritch College by

Date: Jan. 1, 1924

[Signature]
(Advisor)
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Statement of Problem:

Hyperactivity is a common problematic behavioral syndrome frequently associated with brain injury and learning disabilities, along with many other disorder classifications. Hyperactivity manifests itself in some children as the primary problem, whereas in other children it is an ancillary problem stemming from a major medical condition or an emotional disturbance (e.g., cerebral palsy or childhood psychosis). 1 2

This hyperactive child has long been a perplexing puzzle for parents and teachers alike. The symptoms reveal a child who is continually in motion, cannot concentrate for more than a moment, acts and speaks on impulse, is impatient and easily upset. At school he is constantly in trouble because of his restlessness, noisiness, and seeming disobedience. Throughout history (for these reasons) he has been referred to as a delinquent, a discipline problem, or a problem child. It has also been obvious that many of these children were not achieving as it would seem they were capable of, in accord with intelligence testing data. 3

Hyperactive behavior can show itself in a variety of ways. But regardless of how it manifests itself in different children, it is nevertheless a very real and persistent barrier to learning for many children. No matter what label is put on these children, the real problem to be dealt


with is what can be done to help them control this behavior, and eventually allow them to learn as they should. How is it possible to educate children who possess such an imposing problem, one which often occurs during the most critical period of a child's development and self-image (ages 5-12)? It would seem that the obvious answer to this problem would be to attack the behavior itself, and modify it so that learning can take place. At this point the educator looks to research and literature to supply possible (and practical) solutions to this problem.

General Overview of Problem:

The Hyperactive Child - A Profile

The "hyperactive child" presents one of the greatest challenges in education today. He is present in practically every type of educational setting. He can readily be picked out and identified by the behavioral symptoms he manifests in practically every setting. With this in mind the author feels that the problem can best be illustrated by presenting a conglomerate profile of the hyperactive child (including in it all of the maladaptive symptoms and shortcomings of such a child -although no one child is likely to present all of these symptoms).

A Profile of the Hyperactive Child

I. Relationships with other children
   A. Unable to make true friends
   B. Fights with and without provocation

G. Is extremely bosey
   1) "Do it my way or we don't do it."
   2) may take on the role of bully.

D. Disregards rights of others.

E. Generally has poor manners,
   1) is generally too distracted,
   2) or occupied to worry about such trivialities.

F. Is constantly rejected
   1) too active for most children.
   2) can be unintentionally annoying to others.
   3) too demanding for most.
   4) too bossy for most.

II. At Home
A. Cannot remain still for very long.
B. Cannot conform to limits, prohibitions, or rules.
C. Makes excessive demands on parents and siblings
   (in many cases most parents or siblings don't
   have the energy and loving understanding neces-
   sary to meet his needs).
D. Has sleeping problems
   1) super abundance of nervous energy.
   2) unable to relax
   3) consistent insomnia
E. Frequently shows unwarranted aggression to parents
   and siblings (or not proportionately warranted or
   justified considering the stimulus).
F. Is generally considered by the less patient parent
   or sibling - a "true pest." 

III. At School
A. Is constantly talking or making noises.
B. Fidgets continuously (in many cases he looks as if
   he has to go to the bathroom).
C. Cannot concentrate on one activity for any length
   of time.

    Publishers).

    (1969, Royal Oak, Michigan, Michigan Association for Children with Learn-
    ing Disabilities).
D. Has short attention span which may fluctuate from day to day.

E. Cannot conform to school rules
   1) may not be fully aware of them
   2) may be too involved in activity to care whether or not he or she is abiding by school rules

F. Shows poor academic achievement possibly due to one or more of the following characteristics:
   1) distractibility
   2) motor disinhibition (failure of the child to refrain from response to any stimulus which elicits motor activity - e.g.: pencil tapping, foot shuffling, etc.)
   3) disassociating
   4) disturbance of figure-ground relationships
   5) perseveration
      a. in reading orally or visually
      b. in calculating and counting
   6) absence of a well developed self-concept and body image

IV. To Himself

A. Poor body image
   1) unsure of his physical appearance
   2) often poor harmony and coordination
   3) possibility of fine motor problems
   4) his body doesn't always do what he wants it to do, when and how he wants it done

B. Poor self-concept - he experiences how other's feel about him in every facet of his life.
   1) directly - from how they talk to him, about him, respond to his needs or requests
   2) indirectly - how they act and react in his presence
   3) at home - is love shown, genuine concern, understanding, respect?
   4) at school - does the teacher contribute positively to the child's self-concept by giving the child positive feedback whenever possible?

8. Dr. Albert Wender

9. Dr. Albert Myers & Hummell 135-144
Definition of Terms:

The terms: hyperactivity, hyperkinesis and the hyperkinetic syndrome will be used interchangeably throughout this paper to label that behavioral syndrome upon which this paper is based. Terms such as total treatment program, therapeutic milieu, and multi-disciplining treatment program are used to label the behavioral and educational treatment design.
Statement of Purpose:

It was the purpose of this paper to show the recent contributions of the many professions and disciplines regarding the diagnosis and treatment of hyperactivity in children. In presenting these findings and contributions, the author attempted to illustrate how they affect the education of children who have this imposing behavioral and educational problem.

It was a secondary purpose of this paper to show treatment (and ultimately - education) as a multi-disciplinary team attack on an intangible, poorly defined, yet unquestionably real barrier to learning.
Incidence of Hyperactivity in Children

The hyperkinetic syndrome is found in children of all countries in every socioeconomic group. "A study done by Miller, principal of a school in Webster Groves, Missouri, showed the prevalence to be .8 per cent of boys and 1 per cent of girls in suburban elementary schools." 10 A conservative estimate (varying in degrees in different communities) would be that approximately 3 out of 100 elementary school children are moderately to severely hyperactive. More males than females are affected, as is the case in various other childhood ailments. Generally, hyperactive children are of normal or superior intelligence. Some (in addition to the major symptoms) have learning and/or reading disabilities. Nearly a majority are reported to have been behavior problems since birth. Some hyperactive children display a variety of physical symptoms (e.g., clumsiness, dizziness, seizures, etc.), but there exists only a very small overall percentage of these severely afflicted children. Many hyperactive children develop complex behavioral and personality problems as a result (directly or indirectly) of this syndrome. 11


Etiology:

There exists much disagreement and confusion concerning the etiology of the hyperkinetic syndrome. It involves a broad range of possible causes such as: birth defects (e.g., illness, drug ingestion, toxemia), chemical imbalances, genetic differences, brain injury at birth, and early childhood injury (e.g., infectious disease, high fever, etc.). It is known that hyperkinetic symptoms often accompany various major neurological conditions (e.g., cerebral palsy, epilepsy, etc.) and emotional disturbances.

Nearly every child (at some time or another in the course of his life) exhibits hyperactive behavior in response to emotional stimuli (e.g., anxiety, frustration, etc.). Yet such instances of hyperactivity in "normal children" are scattered and isolated, and therefore should not be associated with the hyperkinetic syndrome. This syndrome refers to children whose hyperactive behavior has been the primary cause of their educational failure (and ensuing frustration) and/or emotional condition. The major focus of this paper will concentrate primarily upon children whose (primary) major problem is hyperactivity, not on children whose hyperactivity arises from a medical condition and is therefore an auxiliary problem.

16Ibid, Werry.
The 1971 report of the Conference on the Use of Stimulant Drugs in the Treatment of Behaviorally Disturbed Young School Children asserts that it is best to view hyperactivity as a behavioral symptom which may have its etiology based on a multitude of factors working in combinations (a somewhat multi- etiological pathology) and all contributing in various degrees to the magnitude, intensity, and manifestations of the problem. So intricate and complex is the problem, that it really cannot adequately be defined with any degree of certainty. Keogh confirms this difficulty by comparing hyperactivity with pornography, both of which are hard to define yet you know them when you see them.

Werry believes that focusing on the behavior rather than the etiology enables one to treat a concrete and observable behavioral symptom rather than wasting valuable time and energy in the relative guesswork of determining cause. He feels that this time and energy could more effectively be used in actual treatment, which for many children is a highly complicated and interrelated combination of therapeutic methods (to parallel the multiplicity of contributing causes). He states that "in most children, it will prove impossible to assign an etiology to their hyperactivity with any degree of certainty. To seize on an abnormal pre-natal history, soft neurological signs, or a disturbed family environment as an explanation very often does little credit to a very complex problem, and even more often has little relevance to treatment."
Behavioral Assessment:

Parent and teacher observations are generally the major sources of behavioral data regarding the hyperactive child. Their observations may cover a vast spectrum of behavioral symptoms. The symptoms of the hyperkinetic syndrome include hyperactivity, distractibility, restlessness, low frustration tolerance, inability to take failure or criticism, hypersensitivity, explosiveness, impulsivity, compulsivity, anxiety, tension, periods of depression, lethargy, aggressiveness, destructive behavior, attention seeking behavior, clinging, demanding, insomnia, nervous mannerisms, unpopularity with peers, defiance, unpredictability, dishonesty, irritability, recklessness, and emesis. 21 22 23 The symptoms generally present themselves in combinations (rarely alone) depending upon the individual child. Every particular child manifests his own unique set of symptomatic behaviors (varying with each child in degree, magnitude, and frequency of occurrence).

To this day there exists no reliable and valid psychological assessment instrument (with norms) which can serve as a scale to determine the existence and degree of hyperactivity in children. The author is aware of only one such instrument that has been researched to any real extent. This particular instrument is the teacher's rating scale devised by Denhoff, Davids and Hawkins (1971), which is found in abridged form on

TABLE I  Rating Scale For Hyperkinesis

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<thead>
<tr>
<th>Child's Name</th>
<th>DATE</th>
<th>Birth Date</th>
<th>Rater's Name</th>
<th>Date of Rating</th>
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</table>

- Rate child's behavior on each characteristic in accord with your estimate of the degree to which he possesses and displays the particular characteristic.

- Rate child in comparison with other ("normal") children of the same sex and age.

1. Hyperactivity - rarely sits still, always in motion.

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2. Short Attention Span and Poor Power of Concentration.

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4. Impulsiveness and Instability to Delay Gratification - performs on spur of the moment without thought, demands needs must be met without delay, no future goals, unable to see consequences of behavior.

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5. Irritability - easily provoked and upset, low frustration tolerance.

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7. Poor School Work - overall

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Add Davids p. 36.
Davids points out that when assessing the hyperkinetic syndrome from this scale, only the first six characteristics are rated because school work (47) is an independent assessment. Each of the six traits is to be scored on a graduated scale ranging from one to six (the lowest total score would be six, and the highest possible total score would be 36). In their work thus far, they claim that total scores of 24 or more, strongly suggest the presence of the hyperkinetic syndrome in a child. It should be emphasised here that their research to date has only been preliminary. Davids, however, feels that as researchers across the country gather data with this instrument it will become refined and become a precision diagnostic tool.

McConnell suggests the use of direct counts of motor behaviors by utilising observers and counters. Werry and Wollersheim advocate the use of such mechanical instruments as special self-winding wristwatches, movie projectors, photoelectric counters, and ultrasonic counting machines. Werry asserts that direct counting techniques of assessment are a necessity in determining the effectiveness of any therapeutic program of remediation. Also, diagnosis is best made by a skilled observer who is knowledgeable in this area. The behavioral assessment is a necessary preliminary for any kind of treatment.

Academic - Psychological Assessment

Hyperactive children generally have a very difficult time in nearly all academic subject areas. The results of Minda's study indicate that hyperactive children have a significantly higher failure rate in all academic subjects and are rated by their teachers as displaying more behavioral problems than their controls. While the hyperactive children did relatively poorer on a group intelligence test than their peers, intelligence alone was ruled out as the main contributor to their academic failure. 30 Assessment in this area involves testing data on the child (intelligence tests, achievement tests, perceptual-motor tests, etc.) along with teacher observations and school records.

It is of primary importance that the hyperactive child be brought to the attention of skilled professionals before he has established a consistent pattern of failure in academic areas. Such a pattern can lead to aversion (on the part of the child) toward school, along with an intense fear of the challenges and demands that are part of the learning process.

Repeated failure elicits very little motivation from a child. It is also very damaging to a child's self-concept. Weiss reported that a clinical psychiatric evaluation of 65 hyperactive children (4 to 6 years after their initial assessment) showed the majority to have a low self-concept which often appeared to be related to great apprehension about personal and academic failure. 31 Failure can also lead to more dramatic acting out and aggressive behavior on the part of the hyperactive child. Minda reported a high incidence of disturbance in hyperactive children (39% of children had a


history of acting out, daydreaming, and delinquency over and above the common behavior characteristics associated with hyperactive children). Minde believes, "one reason for this high incidence of disturbance is undoubtedly the fact that many of these youngsters have experienced years of failure, both academically and socially, and that some have learned to withdraw from conflicting situations, whereas others have attempted success through acting out and delinquency." It becomes increasingly apparent that academic success and psychological well-being go hand-in-hand. Therefore, it is imperative that academic and psychological assessment be made of the hyperactive child, and that such assessment should not merely be a categorical description of the child and his behavior. Such an assessment would be incomplete. Rather, it should lead to remedial procedures in educating such a child who is manifesting these behaviors.

Medical Assessment:

In most cases, the family physician or pediatrician is the primary medical practitioner consulted by parents of a hyperactive child. He is usually familiar with the family situation, and knowledgeable of the child's medical history. Stewart and Olds assert that the initial step involved in the medical assessment of a hyperactive child includes a complete physical examination (complete with blood pathology, urinalysis, and other laboratory tests) along with parental consultations. With the information gleaned from the parental consultations along with the overall results of the physical examination, the family physician (or pediatrician) is in a good position to refer the child to a specialist if such a referral is warranted.

32. Minde, M. and Levin, P. 220

33. Stewart and Olds, Pp. 43-45.
One such specialist is the neurologist whose practice generally limits itself to diseases and malfunction of the nervous system. Stewart and Olds point out that the family physician or pediatrician will refer a child to a neurologist only when serious physical signs warrant a complete neurological examination. Such signs include headaches, convulsions, clumsiness, dis- simile seizures. During this examination the neurologist looks for "soft" and "hard" signs of neurological impairment. Stewart describes "soft" signs as being slight deviations from statistical norms in performance of certain tasks and in physical appearance. He asserts that these deviations are found more frequently in children with impairment of the central nervous system, but he also found in many "normal" children. He states that when these signs are found in quantity and are accompanied by other evidence, the neurologist may suspect physiological impairment. He emphasizes that hard signs are usually not found in "normal" children. 

In specific cases, a neurologist may want an EEG (electroencephalogram) on a child. An EEG measures electrical activity in the brain, and traces patterns of that electrical activity (e.g., epilepsy). Stewart feels that:

"On the whole, hyperactive children seem to show more soft signs and more abnormalities on the EEG than do children with no behavior and/or learning problems. Even so, these findings tell little about the individual child, because many children who exhibit hyperactive behavior and/or learning disabilities show no neurological abnormalities and many normal children show EEG abnormalities and soft signs. In addition, different examiners often derive different conclusions from the same electroencephalo-
grams, casting doubt on the validity of such measures." 35

In short, such examinations are beneficial in cases of gross medical conditions (e.g., severe mental retardation, epilepsy, and cerebral palsy) but do not provide much insight into the assessment of hyperactive children who are physically healthy. 36 Specialised examinations of this nature are some-

34Ibid. Pp. 45
35Ibid. Pp. 46
36Or A. Werry Pp. 177
times necessary in order to determine whether or not a child is indeed physically healthy.

Stewart states that if a child exhibits no gross physical conditions it is possible that his hyperactivity may have psychological roots. In such cases a child might be referred to a psychiatrist or clinical psychologist in order to determine if the child's hyperactivity is part of an even larger problem (e.g. emotional illness, childhood psychosis, etc.). But, here also, he states that there must be present some emotional signs which indicate the possibility of mental disturbance in order to warrant an extensive psychiatric or psychological evaluation. 37

Summary:

In light of the literature and research to date regarding the hyperkinetic child, relatively nothing is known of the etiology of the problem. The many combinations of individual problematic symptoms manifest themselves differently in each individual child. An effective multi-disciplinary assessment will supply the necessary information so that a composite plan for effective treatment can be developed. The respective disciplinary assessment methods and procedures can determine (with varying degrees of success) whether or not a child is hyperactive, and to what extent the hyperactivity is affecting the overall progress and development of a child. An accurate multi-disciplinary assessment of the problem, therefore, is a mandatory prerequisite for the development of an effective treatment program.

CHAPTER XI

TREATMENT TECHNIQUES

Medicine - Drug Therapy

Drug therapy has become a considerably prominent method of treating hyperkinetic behaviors in children. Werry asserts that the major reason for its increase in prominence has been its performance as a useful and relatively simple method of eliciting non-hyperactive behaviors while reducing the frequency of occurring hyperactive behaviors, and therefore making it possible for these children to learn with increasing efficiency. 38 Wunderlich raises the question as to whether it is the chemical action of the drug itself that produces the change in behavior, or whether it is the placebo effect of the drug on the patient (either directly, or indirectly through the parents, or in combination). 39 Nevertheless, drugs have a useful role to play in the overall therapeutic program. Grossman asserts that drugs, especially the amphetamines have a definite role to play in the treatment of hyperactivity and other behavioral disorders. 40 The two types of drugs commonly used in the treatment of hyperactivity are the depressants (or tranquilizers) and the stimulants (the most commonly used).

Depressants:

Very few studies have been conducted regarding the effectiveness of depressant or sedative type drugs in treating hyperactive children. The studies that have been conducted have had conflicting results. Alderton and

38 Werry, F. W. Werry Pp. 129.

10
Maddinett have found sedatives to be effective in treating hyperactive and aggressive behavior in children. 

Likewise Freedman found chlorpromazine to be effective as a pharmacotherapeutic agent in reducing hyperactive behavior. 

Yet Eisenberg found them to have nothing more than a placebo effect on his subjects. 

Werry found that sedative treatment showed no significant effect in either helping or hindering children in reducing hyperactive behavior or in learning efficiency.

The depressant drugs (barbiturates - e.g., Phensobarital) after stimulate and excite children with the hyperkinetic syndrome rather than sedate them. This paradox has ridded medical researchers for years, and remains an unsolved mystery. The effect of sedative drugs seems to differ with each child to such a degree, that completely contradictory results are commonplace. The solution to this puzzle seems to lie somewhere within the complex body chemistry of each individual child.

Stimulants:

The stimulant drugs are considered to be the first and least complicated of the medicines used in treating hyperactive behavior in children. Stimulant drugs do not stimulate most children. Wunderlich asserts that Ritalin and the amphetamines have a dramatic effect in paradoxically calming the hyperactive child.

The 1972 NIM report declares such a statement to be inappropriate by saying that "stimulants do not form a "chemical straight jacket"


but really tend to help a child focus on a particular task and purposefully organize and direct bodily movements toward the completion of that task. 46

In their respective studies, Bradley and Lauffer both report that findings indicate that from 60-75 per cent of the children under study showed significant reduction of hyperactive behavior and improvement in school performance and achievement. 47 48 Denhoff and Shermas found a significant decrease in "soft signs" with the group of children under amphetamine treatment. 49

Denhoff found that stimulants like dextroamphetamine (in proper dosage) led to a temporary remission of disabling systematic behaviors, and to a reduction in hyperkinetic behavior patterns in most children. 50 Conrad also studied the effects of dextroamphetamine therapy. But his study was in conjunction with prescriptive teaching on the achievement and behavior of hyperactive children. His findings indicate that dextroamphetamine therapy is an invaluable aid in the overall treatment of hyperactive children regardless of the teaching approach and method employed. 51

Krippner found that stimulants do lead to a reduction in disabling behavior in hyperactive children, but there was no significant increase between hyperactive children on stimulants and those not on drugs in the areas of mental abilities, creativity, and mental health. 52


52 Krippner, R. Silverman, M. Cavalle, M. Sally, "A Study of Hyper-

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52 Krippner, R. Silverman, M. Cavalle, M. Sally, "A Study of Hyper-
Unfortunately academic progress was not measured in this study. Williams and Amadan list the major benefits of stimulant drugs for hyperactive children as: increased ability to focus behavior, less disruptive activity, better peer relations, and improved self-esteem. 35

Many concerns have been raised by the public and the news media regarding the possibility that the medical use of stimulant drugs could create drug dependence in later years or induce toxicity. Williams and Amadan state that "contrary to much popular opinion, these drugs do not make children lethargic, do not produce devastating side effects, and do not foster long-term drug dependency." 36 The 1971 NEH report states that rarely do unwanted mental or physical effects appear in children in drug therapy, and if they should appear an adjustment of dosage usually solves the problem. The report also states that over thirty years of research in the area have failed to reveal any association between the medical use of stimulants in the pre-adolescent child and later drug abuse. 35

In an overview of research findings, the NEH report asserts that stimulant drugs are beneficial in about one-half to two-thirds of the cases in which trials of the drugs were warranted. In these cases, the aim is not to "solve problems with drugs," but rather to allow the child to use and organize his or her abilities in responding to meaningful stimuli. 36 DuPlessis reports that:

"Clinical experience has shown that the properly diagnosed child is not peppep up under amphetamines or put out of touch with his environment. Instead, his abilities are mobilized and focused on meaningful stimuli. His bodily movements are organized more purposefully. How the amphetamines improve the behavior of the

55Ibid. HEN Report Pp. 3.
56Ibid. (HEN Report).
hyperactive child with learning problems isn't clear. These drugs
don't simply slow the patient down like a tranquilizer, nor do they
speed up or accentuate excessive activity, as might be expected of
a pep pill. Instead, in some manner which is still in dispute, they
make the brain function better. 57

Relatively little is known as to how drugs actually work in the human
organism. Yet their effects have been successful with many children. Regarding
the usage of drugs with hyperactive children, Denhoff feels that "If these
drugs can help certain children focus their attention and concentration, and
thus profit from the many hours spent in the school, then they serve a useful
function for these children at this particular time in their academic and
psychosocial development. 58 Conrad's conclusions concerning drug therapy
are that "1) most of these children have specific learning disabilities in
addition to hyperkinetic symptoms, 2) regardless of the educational or remed-
ial approach employed—drug therapy is an important adjunct to the overall treat-
ment of hyperactive children, 3) medication alone is sufficient treatment only
for hyperactive children who have no specific learning problems, and 4) more
sophisticated and better controlled methods of remediating the underlying dis-
ability need to be developed." 59

Vitamin Therapy

The most recent practice in treating hyperactive behavior in children is
vitamin therapy. This methodology is only in its fetal stages of development
as a method of treatment. Vitamin therapy is based on the findings that hyper-

57 David Da Press, "Pill for Learning" from Wall Street Journal, Jan. 28,
active children are strongly prone to allergies. Wunderlich therefore suggests the possibility of some vitamin deficiency as the possible cause of the allergies. He suggests megavitamin therapy ("treatment involving the use of large doses of relatively harmless vitamins in combinations) as a possible solution to vitamin deficiency and allergy. Pauling has found that large doses of Vitamin C reduce the occurrence of colds and allergies. Wunderlich asserts that Vitamin C, when used in extremely large doses has been effective in reducing hyperactive behavior in many children. He also found that large doses of Pyridoxine (Vitamin B6), Riboflavin (Vitamin B2), Thiaminamide (Vitamin B1), and Calcium Pantothenate, working in combinations are effective in reducing certain specific behavioral symptoms of hyperactivity.

Wunderlich states that certain foods can be very harmful (even toxic) to some children and not to others. A child may have an allergy to frequently eaten food which may be the cause of his hyperactivity. His findings support that these foods tend to be either acidic, highly proteinous, very spicy, or containing a stimulant such as caffeine. He suggests a carefully supervised diet in order to detect the "food culprit". Such a diet should be under the guidance of the child's physician. No real research studies have yet to be done in these areas (it is so new).

61 Linus Pauling, "Vitamin C and the Common Cold", 1970 San Francisco, Cal. (W. H. Freeman & Co.).
62 May C, Wunderlich p. 376.
Behavior Management Techniques:

In many cases disruptive and destructive behaviors associated with hyperactivity can be remediated by behavior modification techniques. It must be remembered that in attempting to modify behavior one must not attempt to modify all behaviors at once. It is recommended by most behavior modifiers that modification should be limited to one specific, concrete behavior at a time, such as sitting down - not walking aimlessly around the room, etc. Rewards should be high in appeal value for the child (the more the child likes the reward, the harder he or she will work to gain the reward). It should be given frequently at first; for example during short time periods when a child is sitting down and working. As the length of appropriate action increases, the amount and frequency of reward should decrease so that eventually the child will successfully be weaned from the token motivator and retain the learned appropriate behavior indefinitely.  

The basic design used in the functional analysis of behavior is called an A/B design. The A Phase (or Baseline Phase) is the record of behavior(s) before treatment is introduced. The B Phase (or Treatment Phase) is the record of same behavior(s) when treatment is introduced. The next A Phase (or Reversal Phase) is the record of the same behavior(s) after treatment is removed. And the final Phase B (or Treatment Phase Two) is the record of the same behavior(s) after treatment is reintroduced. This design runs in cycles until (ideally) the token reward is gradually phased out completely, and the appropriate behavior has been learned.  

63 Ibid.  
64 Ibid., p. 126-127.
Allan helped a 4½ year old hyperactive boy acquire lengthened attending behavior spans by means of rewarding the child with attention and approval during periods of attending to a single activity. Whenever the child attended to a single activity for one minute, the teacher immediately showed approval to the child for as long as he remained attending. Any other behavior other than the attending behavior was ignored by the teachers. The number of activity changes decreased significantly after seven days of modification. When the teacher reversed the procedures, the hyperactive behavior increased. When the teacher reintroduced the original reinforcement in the final phase of the cycle, there was a significant decrease in the amount of activity changes and hyperactive behaviors. This study supports the idea that a child's hyperactive behavior can be modified to a great extent. Results of other studies (Doubres & Daniels 66) also show that hyperactive behaviors can successfully be treated by behavior therapy techniques (operant conditioning).

Patterson set up an experimental behavior modification study with a nine-year-old hyperactive boy, whose frequent disruptive behaviors upset the classroom setting. A token reinforcement program was set up especially for the child.

He noticed that the child's disruptive behaviors could be classified as talking, hitting, and pushing. He placed a small box with an electric counter and a flashlight bulb on the boy's desk. If the boy did not elicit any disruptive behavior over a period of time (increasing in length as the boy progressed) the counter registered a click and the light flashed. When each session ended, all of his classmates divided up the amount of tokens (candy


and premises), that corresponded to the number of points registered on the electric counter. The finding indicated that 8.6 fewer disruptive responses occurred when conditioning was in progress. A follow-up on the boy's progress after conditioning found that the teacher noted that he was less disruptive and was playing more and relating better with the other children in class. 67

Patterson advocates getting the other children in class involved (in assisting in the experiment) as much as possible. This sort of cooperation builds feelings of accomplishment and general concern for the well being of others. He also recommends that children under study direct their own behavior. In this way, he believes they will come to a forced awareness of their own misbehavior and think twice before doing it again. 68

Behavior modification and conditioning therapy is relatively new as a remediation treatment, but it can be very successful, and it does exhibit a healthy attitude toward the assessment and management of behavior.

Educational Treatment:

Strauss and Lehtinen base their treatment strategies on the idea that the hyperactive child is abnormally responsive to the stimuli of his environment. Therefore, they believe that the hyperactive child can be helped very little in a regular classroom setting due to the abundance of distracting stimuli affecting every sense organ. They believe that the child must have an educational environment designed specifically to meet his needs. 69


Lehtinen feels that the class size should be small (no more than twelve per class), and the classroom should be large enough so that each child can be situated a good distance from the others. The room itself should be free from any visually stimulating material, and if necessary the child should be provided with screens around him (or study carrels) to further isolate him from distracting stimuli. The teacher should wear clothing that is plain and not stimulating. 70

The child should be provided with the school materials he needs, only as he needs them. The textbooks and other reading materials should be devoid of pictures and illustrations that may be distracting. Lehtinen recommends uncovering a printed page (one line at a time) as the child is reading. She believes that in such a setting the academic needs of the hyperactive child can best be met. 71

Lehtinen advocates the imposition of external controls on the child’s behavior until such time when the child is able to control his own behavior internally. 72 Wunderlich provides a graphic example of the concept regarding the gradual substitution of external controls for internal controls in Table. Lehtinen feels that without controls learning cannot take place and without learning internal control is not possible. 73 Techniques are devised to help the child control his random movements. Johnson and Myklebust give the example of a seven-year-old who learned to walk down the school cor-


71 Ibid. Pp. 139

72 Ibid. Myers and Hamill, p. 145.

73 Ibid.
riders with his hands in his pockets in order to control his urge to touch everything he passed along the way. They give another example of a child who darted in and out of the classroom while he was walking from one place to another. They taught him to follow block patterns in the tile floor until he established the correct habit of going directly from one room to another. He eventually no longer needed to look at the tiles but gradually learned to walk appropriately down the corridor with the other children. 76

In regard to cases of in-seat behavior Strauss and Laktien recommended that a teacher should sit or stand behind the child and place a hand on his head or shoulder as a cue to stop the distracting behavior. They have found that the child will stop the movement, and eventually internalize the feeling of the hand as he gains the "essential inner control." 75

Cruickshank stressed that structure must be emphasized at all times in the management of the hyperactive child. 76 Hallahan asserts that the hyperactive child needs the consistency and security of a highly structured educational environment where he is not threatened with the unexpected. 77

Cruickshank states that options should be denied the hyperactive child until he reaches that point at which he can profit from decision making rather than being confused and frustrated by its multiple choices. He feels that a permissive environment will have a detrimental effect on the hyperactive child.


75 Ibid.


"Gradually decreasing amounts of external control are required as internalisation of control occurs within the individual. If external control is not decreased as internal control increases, the opportunity for use of self-control will not flourish, and may lay forever dormant." – 78

He believes that the reduction of environmental stimuli and space is imperative as a foundation for the effective management of this child.

The greatest single need of the hyperactive child is a constant and structured environment without options. Kappits also stresses the need for these children to be placed in a carefully designed and outlined educational environment built upon reduced stimuli and reduced space. Johnson and Nyklebust believe that the amount of material in their desks should be reduced to a minimum to avoid manipulation of extra pencils, crayons and papers. They also recommend that the teacher and students alike should wear simple (not distracting) clothing.

Hallahan suggests the use of cubicles as an important adjunct in the overall program to help the hyperactive child improve his attention to the task at hand. He cites an experiment performed by Shores and Haukrich to support the effectiveness of cubicles. "Using a small group of hyperactive and distractible children with IQ’s in the 80’s-90’s, Shores and Haukrich placed the subject in and out of the cubicles for short periods of time, while measuring reading rates, arithmetic rates and attending behavior. It was discovered that during the children’s placement in the cubicles, their attention increased significantly, but their reading and arithmetic rates did not."1

On the basis of Strauss’ clinical and psychological findings Lehtinen believes that once behavior control has been achieved the focus of treatment

82 Ibid, p. 105
should be on the organic disturbance itself. She believes that the educa-
tional thrust should be in the area of weakness, rather than in the more
motivating (success oriented) areas of strength. The success oriented ma-
terials already served their purpose in contributing to the child's attending
behavior, now it is time to concentrate on his weak areas. She stresses
training in diagnosed areas of perceptual and motor weakness if they exist.
She also suggests that kinesthetic training can be very beneficial for these
children.

Teacher as Therapist:

The teacher is the controlling figure in the education of a hyperactive
child. It is his responsibility to control and manipulate the classroom en-
vironment so that it provides the hyperactive child with the needed ingredi-
ents to successful learning (e.g., consistency, management, reduction of
stimuli and activity, etc.)

The hyperactive child has a tremendous need for consistency on the part
of his teacher and the therapeutic program which the teacher sets up for him.
This type of child finds it nearly impossible to accept and adapt to change
and fluctuation on the part of the adult who controls his classroom environ-
ment. He has enough difficulty in perceiving his environment even when it is
a stable one. The teacher must be as consistent as is humanly possible.\textsuperscript{83}

The teacher must provide the hyperactive child with an education en-
vironment that is relatively free from distracting stimuli. The setting should
not detract or distract from the prime focal point—which is the instruction-
 material itself. The teacher must provide the child with material that is

\textsuperscript{83} Dew Alt, Strauss and Lahtinen, p. 127-145.

\textsuperscript{84} Dew Alt, Stewart and Olds p. 135-142.
stimulating and capable of holding the child's interest and attention for a substantial period of time. The materials should be given to the child one at a time (when the child is finished with one piece of material—a new piece should be given to him). 85

The teacher should eliminate all unnecessary activity from the classroom. In fact, all activity should be reduced in every way possible until it is quite obvious that the children can cope with it. This means that the hyperactive child should not be allowed to leave his seat and walk around the room at will. The teacher should plan regular breaks, and gross motor periods that will give the child opportunities to burn off as much excess energy as he wants. These breaks and activity periods should be scheduled periodically during the classroom at regular intervals to break the monotony of classwork. 86

Of prime importance to the success of the instructional program for the hyperactive child is the controlled classroom management. For it is in the classroom that the child learns the many difficult lessons involved in living and working with other people. He must learn to accept controls imposed by society by living and working in a well-planned and controlled mini-society—the therapeutic classroom. It is here he must learn to take the responsibility for maintaining himself in an acceptable way, and learn to anticipate and accept the consequences of his behavior. 87 88

The teacher should make sure that he is well informed about any new developments concerning any of his children from other professionals (doctors, psychologists, etc), as well as developments at home (from parents). 89

85a Strauss and Lehtinen, p. 131-135.
87a Strauss and Lehtinen, p. 141.
should have access to any reports on his children from the various disciplines involved. The teacher must be able to interpret these reports in order to get insight and understanding into the child's learning problems. He must be receptive to feedback and cues given by his children, which let him know if a certain strategy, method, technique, drug or whatever is effective. The teacher must pass on new information and observations to the parents and professionals working with the child—of keep them aware of behavioral changes (good or bad) if any.

It takes a great deal of sensitivity, understanding determination, and skill on the part of the teacher who works with hyperactive children (in whatever setting). He must know what type of program to build for each child within his group. He must know how much to confine the child and his behavior, and be alert to the need to extend and/or relax the confinesments in order to give the child an ever-increasing sense of responsibility for his behavior. He must positively contribute to the child's self-image in every way possible. His job holds a challenge that few persons can handle. 89 90 91

89 ib. Strauss & Lehtinen, p. 141.
91 ib. Patterson, 218-225.
Suggestions for Dealing With Various Symptoms of
The Hyperkinetic Syndrome

By: Mark Stewart 92

Distractibility (short attention span and inability to persevere)

Divide classwork into small units. Train the child to ignore unavoidable distractions. Give immediate or near immediate feedback for completion of work as soon as he shows you what he has done, praise him for completing the task. Intersperse work periods with break and activity periods. Ideally the work periods will gradually lengthen and the activity periods shorten in time.

Excitability

Avoid as much as possible situations that might produce excitement. Prepare for those situations that cannot be avoided. (e.g.: fire drill). Learn to take cues from the child that might tell you when he is on the verge of exploding. Ignore outbursts or tantrums.

Inattention

Teach child that it is necessary at times to wait for things to come. Everything does not have to happen right away. Occupy him with a motivating activity.

Impulsiveness

Teach the child to consider the consequences of his actions on a continuing day-to-day basis. For example, in games - have him count (to ten) before he moves. Teach him to say "Stop! listen! Look! and think!" before answering.93

92See ibid. Stewart and Olds, Pp. 135-146.
93Ibid. Pp. 146.
Overactivity

Teach timing—being active at appropriate times. Attempt to channel the overactivity into the lesson or task by the use of kinesthetic aids and materials he can touch, move and feel. Be realistic in your expectations (don’t expect to get rid of all the overactivity). Do not bore the child. Find his or her interest and hold it for as long as possible.

Clumsiness

Give the child regular, controlled, gross-motor periods that are structured. They should include well-defined, and structured movement patterns.

Irresponsibility

Gradually give the child more and more responsibility as he or she shows he can handle it. Start with simple classroom chores for reward. Gradually make-up a personal responsibility list including on it such things as work assignments, home chores, health (hygiene) habits, and care of personal property.
Management Suggestions for Teachers

1. Define the problem,
   a) classify in range of magnitude from mild to severe,
   b) list kinds of behavior involved,
   c) concentrate on one behavior at a time.

2. Analyze the problem (make sure it really is a problem).

3. Explore the child's motivations (ask the child and parents).

4. Do all you can to change external aspects of the distressing situation.

5. Arrange regular meeting with parents and others involved with the child.

6. Make contracts with the child.  Stipulate:
   a) child's part - his or her promise,
   b) teacher's part - the payoff.
   Stress:
   c) positive attitudes
   d) start with success — reward it — work from there.
   Urge:
   e) parents to provide follow-up contracts at home.

7. Aim to change behavior bit by bit.

8. Let the child experience the natural consequences of his or her behavior
   for himself (when safely possible).  Do not:
   a) pamper,
   b) over-protect.

9. Avoid nagging - if he or she doesn't fulfill his or her part of the con-
   tract, the child doesn't get the reward.

10. Approval of parents and teachers is an important reward.  It should event-
    ually take on the role of primary motivator.

11. Be consistent. (the child needs the security)

12. When success is attained change to intermittent reward and reinforcecemnt.

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96 97a Patterson (et. al), Pp. 224-226.
97b 97a Williams and Amadian  Pp. 151-152.
Parents as Therapists:

Eisenberg emphasizes the therapeutic possibilities of the parents' role in the overall treatment of their child, for they are able to structure and control their home environment, form and regulate routines, avoid over excitation, and provide consistency. They can give the child what he or she needs during the other sixteen hours of the day: follow-up, consistency, love, and understanding.

Informed parents of hyperactive children play a key role in the total treatment milieu. They must provide consistency and follow-through (at home) of management principles and methods in operation at school. They also serve as the necessary intermediaries between the medical, behavior, and education practitioners. They must provide these team members with the necessary reinforcement follow-up outside the school setting. Parents can be instrumental in providing the child with positive feedback (through direct and indirect responses) and a good self-image.

In this chapter, research and literature regarding the treatment and education of the hyperactive child was previewed. No one discipline claims to have the solution to the problem in its entirety. Successes have been shown by various disciplines in treating certain specific symptoms of the problem. Each discipline has made valuable contributions that are applicable to the total treatment and educational program for the hyperactive child. It therefore becomes quite apparent that the treatment and education of the hyperactive child is a many faceted, highly individualized, and multi-disciplinary endeavor.
CHAPTER III

Summary of Literature and Research:

The research and literature regarding the hyperkinetic syndrome contains considerable disagreement regarding the disorder's terminology, etiology, behavioral correlates, and treatment principles and techniques. Keogh states that the word (hyperactivity) itself is "a general and emotional laden word; it is a catchall for many descriptive terms, a construct lacking in precision or in specificity of defining parameters. Most investigators focus on the symptomatology of the conditions without defining the construct." 97 Yet in order to define the construct a clear understanding of the etiology is imperative. Werry believes that the etiology of the syndrome is both "heterogeneous" and "multi-variably" determined. He states that the prominent belief that most of these children have some kind of cerebral dysfunction is presently "no more than an unsubstantiated hypothesis" in which the relevance of the organic factors in the diagnosis and treatment of the behavioral syndrome has yet to be substantiated. 98

Medical research into the problem has shown that drug therapy does help control symptomatic behaviors of many hyperactive children with varying degrees of success. Drug treatment involves a trial and error method of prescribing appropriate medication. Eisenberg states that before an extensive period of therapeutic trials (involving various drugs in various dosages) it is difficult to predict which drugs (if any) will be effective in dealing with the hyperactivity of the child. Drug therapy is an important adjunct to the total treatment milieu. 99

98. [Ref. 11] Werry Pp. 183
99. [Ref. 11] Eisenberg Pp. 1091
Behavioral management has shown considerable success in its research studies regarding the effectiveness of various behavior modification and conditioning techniques in reducing disturbing hyperactive behaviors. These techniques are gaining widespread support by educational practitioners. They definitely have an important role to play in the total treatment program.

There exists little conflict or contradiction among the major educational strategists regarding effective programs and methods in educating the hyperactive child. Most of the prominent educators seem to be in agreement that the ideal educational setting for the hyperactive child is one which is free from distracting environmental stimuli. In general, there is agreement that this type of child needs structure, constancy, consistency, a controlled environment, positive reinforcement of appropriate behavior, understanding, and love. They feel that it is imperative that every hyperactive child be given an individualized program geared to meet his own particular needs. If such a program is provided for these children it will reinforce their learning endeavors and provide for them a success orientated educational environment that is motivating and satisfying socially as well as academically.

A Multi-disciplinary Trend Toward Treatment:

It becomes apparent in reviewing the relatively recent research and literature regarding hyperactivity that no one discipline alone can supply an adequate solution to the perplexing problem of educating disciplines in treating certain behavioral symptoms of the hyperkinetic syndrome by experimenting with various methods and techniques. Yet the most any one discipline can ever hope to do is to contribute to the overall treatment of the condition. Therefore treatment becomes a many faceted, multi-disciplinary endeavor requiring the mutual trust, respect, cooperation and collaboration
of everyone who works with the hyperactive child. If these prerequisites are met, parents, teachers, social workers, physicians, neurologists, psychologists and other professionals can effectively collaborate in organizing, implementing and monitoring successful treatment programs.

Tohassen proposed a procedure for medical, parental, and psychoeducational collaboration which has considerable potential as an effective feedback method for medical assessment and treatment. The first step in the procedure requires the teacher to write up a detailed description of the child's classroom behavior (a checklist). Next, the psychologist should provide testing data on the child (intelligence, achievement and perceptual functioning). Then the teacher and psychologist should present this whole package to the parents with a recommendation that the child's case be examined by the family physician, in order to determine if the child might be in need of specialized medical examination and possible treatment. If parental consent is given, the teacher and psychologist should attempt to get permission to contact the family physician and or specialist themselves. They should then contact these medical practitioners and describe the child's symptoms and attempt to enlist his cooperation by agreeing to supply them with weekly feedback (teacher's and parents observations regarding the effects of medication and or treatment), to determine the effectiveness of treatment. Educators and psychologists should also keep the parents and the medical practitioners aware and informed of any new management and or teaching techniques that they are trying with the child. This therapeutic procedure is an ongoing process of mutual collaboration and reciprocal feedback. It is a multi-disciplinary effort to establish a total therapeutic milieu for the hyperactive child. 100 Berry suggests that such a total treatment

program holds great promise of success especially if it includes therapeutic roles for the parents, who can extend the therapy to the home environment. 101

Conclusions:

It is quite evident that research and literature to date regarding hyperactivity in children is inconclusive and certainly insufficient. Contributing to this problem in research (and ultimately in therapeutic design and program development) is the evident lack of clearly defined criteria needed to identify and recognize hyperactivity. The term itself is not precise, and carries with it a vast multitude of characteristic symptoms and behaviors which work in varying combinations in different children.

Hyperactivity, as does any behavioral problem, involves many disciplines in its treatment. Research and literature regarding this problem therefore assumes a multi-disciplinary focus. In reviewing the research and literature to date it becomes apparent to the author that the effective treatment and education of the hyperactive child will involve and multi-disciplinary treatment design based on mutual cooperation, communication, and concern for the welfare of the child.

Although research and literature regarding hyperactivity is really only in its infant stage it has contributed some methods and techniques which promise to be potentially successful therapeutic tools when used in a carefully designed, closely monitored, and individually orientated treatment milieu.

In summary, the research and literature on hyperactivity has made it increasingly apparent to educators just how complex and confusing the problem of educating this type of child can be. The author believes that the complexity stems from the fact that each child is a unique and complex person.

101See J.T. Werry p. 182
who is unlike any other person. The author also believes that some of the confusion may be due to the tendency of educators and therapists to lose sight of the child in their attempt to treat the problem. Ames, Gillespie, and Streef point out that:

"Sometimes in working with handicapped or troubled children we tend to become a little too clinical - to think of the child as a problem and to forget that he is also a child. We all need to remember that whatever the development level, whatever the level of intelligence, whatever the personality, whatever the problem, each child is a marvelously, in fact, a miraculously growing organism – one who expresses himself clearly at every step of the road if only we are willing and ready to listen to what he is telling us. As we work with older children, and with problem children, we sometimes lose sight of the thing that those working with infants and normal preschoolers know almost without verbalizing it. That is behavior is shape and that it changes in orderly and predictable ways." 102

BIBLIOGRAPHY

Books


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Wanderlich, Ray C. "Hyperkinetic Disease." Academic Therapy. 5 (82) 99-108.


Newspaper Articles