HYPERKINETIC SYNDROME IN CHILDREN

THESIS

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By

IBTEHAL IBRAHIM ISMAIL

(M.B., B.Ch.)

Supervisor

Dr. ADEL MAHMOUD DEMERDASH (M.D,RSCH)

ASS. Professor of Psychiatry and Neurology.

FACULTY OF MEDICINE

AL-AZHAR UNIVERSITY

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Contents .

Chapter (I)

Introduction

Human behaviour : -

The behavioural repertoire of the young child is relatively limited , undifferentiated and nonspecific. As he develops , he differentiates and integrates his various functions and exhibits progressively more complex behaviour .

At an early stage , the young child responds with the same symptoms and behavriour to a variety of circumstances.

Behaviour disorders in children have always been and still are a field for extensive study due to the fact that it is a wide field , increasing quite remarkably due to the concern it arouses in parents of these children.

Most psyhiatric disorders especially inearly childbood do not have clearly defined etiologies and are viewed as resulting from a convergence of genetic, acquired , organic and environmental factors.

Achild is considered to have a behviour disorder if he behaves persistently in a way that is out of keeping for his age , sex , level of maturity and

social setting and sufficiently so to arouse the anxiety of other people around him at home or school (postgraduate doctor , 1982) .

The most frequent behaviour disturbances in childhood are : -

1. Sleep disturbances : insomnia , night terrors , night mares , sleep walking (samnambolism) ,

2. Eating disturbances : refusal of food , food - fadism , nausea , vomiting , abdominal pain & chlics, constipation ; .....

3. Disorders of excretory functions : duirnal or nocturnal enuresis , soiling and fear of defecation.

4. Language disturbances in children may take the form of :

   Stammering , delayed onset of speach, transient mutism , disorders of articulation as lisping , baby talking , aphonia .

5. Unusual affective behaviour : excessive dependency, fear of separation from mother , fear of specific people or places or noises , fear of animals , fire , inadequate relation to adults , to children as withdrawal, impulsive or destructive behavior

out of proportion to or in absence of a precipitating event , ...

6. Developmental disturbances in which the presenting complaint is retardation in all or some of the developmental aspects e.g. failure to thrive , to sit , stand or walk , late speach or absence of age appropriate affective behaviour .

7. Disturbances of psychomotor activity as hyperactivity, hypoactivity , rhythmic activity as body rocking , head hanging or tics (habit spasm) , thumb sucking, nail biting .

8. Disorders of sexual development as : masturbation , homosexual activities , ...

There are additional behaviour disorders which are typical of the ageperiod 6-12 years (school aga through pre-adolescence) which include the Hyperkinetic behaviour syndrome (the subject of our work) as well as learning disturbances.

Also , it includes the disturbance of social behaviours : the school age may be the initial period of antisocial and destructive behaviour such as : trauancy, lying , steeling, aggression behaviour , cheating, fire setting , ...

Antisocial behaviour includes : -

I. Conduct disorders : - to which traditionaly we refer to the behaviour disturalances in children which are persistent source of difficulty in the home or school or community , thus including the entire behwviour disorders ranging from extreme provocativiness , dis-obedience ,negativism , temper tantrum , cruelty,social behaviour and abnormal sexual activity .

Aetiology and pathology of conduct disorder way be : -

a) Adaptational or reactive : when they appear as transient phenomena in the course of normal development and represent the failure of the parents to socialization of the child which in turn has given rise to poor impulse control .

b) Neurotic manifestation : such as counter phobic reaction aggressive due to a compensation for age weakness with hostile acting out of attitudes that are felt towards parents .

C) Psychiatric manifestation due to underlying personality disorders .

d) Brain damage or organic behaviour disorder .

II. Delinguent behaviour or
sociopathic personality disorder :

- This may include actions that are classed as criminal among adults such as assult and robbery as well as offenses that are strictly age related as trauancy and sexual activities.

There are two types of delinquent behaviour :-

a) Antisocial reaction : - characterises the children and adolescents who are always in trouble and who seem not to profit from experience or punishment and who have no loyalities to persons other than themselves.

b) Dyssocial reaction : characterises the children who have been brought up in amoral or immoral families or uinstitutes, who have identigied with strong loyalities to the criminal element e.g. child whose parents are babi tual criminals.

Both antisocial and dysocial reactions are people"who are ill primarly in terms of society " and of comformity with the prevailing cultural milieu and not

only in terms of personal discomfort and relation with other individuals .

- Delinquent behaviour may be socondary to mental retardation , epilepsy , brain dawage or childhood psychosis and affect deprivation .

- E.E.G. is usually alinormal in all .

Aim of Work.

- Behaviour disorders are now becoming one of the common school problems.
  Between 7% and 20% of children of school age have been found to have a behaviour chisorder & avout [redacted] 25% are seriously disturbed and urgently in need of treatment (Postgraduate doctor middle East , May 1982) .

- So the present work was designed to elucidate some of the behavioural anomalies assoliatea the hyperkinetic behaviour .

In this study will try to find the difference between hyperkinetic children and normalchildren taken as controls of the same age and social status as regards :-

1. The influence of social , economical and emotional factors on the behaviour on hyperkinetic children.
2. Psychiatric findigs .
3. The medical and physical findings.
4. Psychological testing as regard the I.Q.
5. E.E.G. records.

The Hyperbinetic Behaviour disorder Syndrome

Terminology and Definition

The Hyperhimetic syndrome was first described by the German physician , Heinrich Hoffman , over 100 years ago (Hoffmann 1954) . Since then several authors have outlined a syndrome which begines early in life , which is more common in boys and is manifested by a symptom pattern of byperactivity , impulsiveness, distractility and exitability (Anderson 1963 , Bakin 1949, Bradley 1955, Burhs 1960) .

Aggressive and antisocial behaviour and specific learning problems , Emotional liability , chepression and low self - esteem are often considered part of the syndrome (O'Mallay and Eisenberg 1973).

The Hyperkinetic behaviour disorder syndrome is a disorder mwhich lies between psychiatry and newrology. There is an overlap of strictly liebavioural and organic phenomena and the relative importance of genetic , environmental , psychological and structural factors is never clear .

There are many definitions put down by different authors with general agreement on the basic characteristics of this syndrome .

At the outset , it is important to briefly address the issue of terminology , changeing definitions over time have caused much misunderstanding (Am. J.Dis.child 1979) . There has been a succession of terms that have been used to describe these children with hyperhinetic behaviour , disorders including :

- " The brain dawage " syndroms " (Strouss & lehtinen 1947)
- " Minimal brain damage " (Gesell & Amatruda 1949).
- "Organic driveness " , " overactivity" ,
- " Hyperkinesis " , and most recently the " the Hyperoctive child syndrome " .
- Each term has had its proponents and critics but few have stood the test of time .
- Since these terms have been used in widely divergent ways by different investigators , the same children have been described by different terms and differen children by the same terms. Thus, research findings can not be readily compared .
- The term " brain damage " is present (and presumably causal) in the hyperkinetic syndrome . However , if brain damaged is used in its literal

sense to mean structural abnormality of the brain, then brain damage syndrome is an inaxxurate and misleading term. While some hyperhinetic children may suffer from frank brain damage, it is clear that the majority don't (Werry 1972) . Likwise, most brain damaged children don't present with the hyperkinetic syndrome (Rutler et al 1970 a) .

- Brain dysfunction " may be a more accurate term than " brain damage " or describe those children who present with less well defined disorders manifested by more subtle neurological signs.
These more subtle defects in co-ordination or language may only occasionally be associated with actual damage to the brain(Rutler 1968) .
However , many hyperhinetic children don't demonstrate even these subtle neurologic signs .
Thus " brain dysfunction syndrome " is an inappropriate term to describe the large percentage of hyperkinetic children who present prinmarily with behavioural abnormalitiex.
Finally , teckniques for the reliable and accurate quantification of brain dysfunction in children are not available . Yet , prefixing the word"minimal"

to " brain dysfunction " implies just such a quantification .

- Minimal brain dysfunction " was adopted by the U.S. Department of Health , Education and Welfare in 1966 as a single term that refers to a spectrum of learning disabilities and minor neurological problems. It has enjoyed widespread use although there has been criticism of the term by those who favor more specific terminology . One major disadvantage of the MBD concept is the implication that there is an underlying organic abnormality in hyperactive and learning disabled children . This is misleading since there is no evidence of brain damage in the majority of cases.

- While the concept of a "-Hyperactive child syndrome " or " Hyperactivity " is subject to some objections leveled at the term " MBD " , it has achieved a high level of acceptance among professionals and the public alike . Hyperactivity initially referred to a state of excessive body movement . If the overactivity was the only

problem , these children would get along quite well. Thecontext in which the term is generally used refers to a behavioural syndrome .

Therefore in this chapter , the term " Hyperkinetic behaviour syndrome " will be used to denote a behavioural syndrome only characterised by : a short attention span , impulsivity , excitability and motor overactivity , with consequent poor school performance or behavior problems. Partly because of the difficulties in trying to quantitate such things as attention and impulsivity , these criteria don't define a homogenous group of children . In other words , there is no atypical " hyperactive child , but rather a heterogenous group of children whom we call hyperactive and who share a number of behavioural features .

The attentional deviancy is paramount in most cases and the hyperactive syndrome is best considered as an " attentional disorder " . Indeed , this later description is preferable , but the tern " hyperactivity " remains firmly entrenched in the medical and lay literature . (Am .j. Dis . child , April 1979).

to , and compensates for this dysfunction which in turn is a composite of the child's ego strenth , coping mechanisms and state of child parent equilibrium.

- According to the U.S.Department of Health, Education and Welfare (HEW) , the term " minimal brain dysfunction syndrome " (MBD) refers to : children of near average , average or above average intelligence with certain learning or behavioral disabilities ranging from mild to severe , which are associated with deviations of function of the C.W.S. These deviations may manifest themselves by various combinations of impairment in perception , conceptnalization , language , memory and control of attention, impulse or motor function . Furthermore . The HEW Task Force found the following . MBD characteristics most often cited : -

- hyperactivity .
- perceptual motor impairments.
- emotional lability.
- general co-ordination deficits.
- disorders of attention (short attention span, distractability , perseveration).
- impulsiveness.
- disorders of memory and thinking .

- specific learning disabilities (reading , arithmetic , writing , spelling).
- disorders of speech and hearing.
- equivocal newrologic signs and E.E.G . irregularities.

(Principles of pediatrics - Health care of the young).

- Mawice W. Laufer (kaplan) 1960 considers hyperkinetic impulse disorder under the heading of " minimum brain injury " or " minimum cerebral dysfunction " :
  - hyperactivity is one of the halt marks of this syndrome .
  - short attention span & ready extractability .
  - impulsive & inability to delay gratification .
  - They seem to have need to handle & finger things.
  - They are often explosive & irritable with emotional lability .
  - Disturbances of visuimotor performance & hand eye co-ordination .

- Strauss and lehtinen (1947) mere pioneers in describing the nature of hyperkinesis in brain damaged children. They emphasized the cardinal features of overactivity , distractibility , impulsivity and emotional lability that interfered with learning and socialization of the brain damaged child . Many subsequent workers have utilized the formulations of strauss in describing children with behavioral disturbances believed to be due to brain injury.

- According to kleih and Gittelman-klein (1971), the hyperkinetic syndrome is charactocized by:-

  - motor byperactivity ?
  - poor impulse control .
  - low frustration tolerance .
  - short attention span .
  - Distractibility.
  - Aggressi eness.
  - Diminished sensitivity to reinforcement.

- It is characterized by the relatively high intercorrelation between the different symptoms of syndrome is composed , and each symptop in itself is neither sufficient nor necessary for establishing the diagnosis.

- At the present time a major difficulty exists in defining suitable diagnostic criteria, since most normal children will show some of the features listed above and hyperkinetic children don't show all of the features all the time (essential neurology 1978) .

  Therefore , it is important to obtain inforination from the teacher or day - care centre staff as well as from both parents , in order to determine whetber overactivity, distractibility and frustrated behaviour interfere with the child's day - to - day life .

Chinical picture : -

The typical child with the hyperbinetic syndrome is generally brought to proggessional attention early in his elementary school years . However , careful questioning usually reveals symptoms from early childbood i.e hyperkinetic impulse disorder may have its onset in the earliest days of life .

The clinical picture varies from the little boy who is silly , immature and not performing academically up to expected standards to the marked by active , aggressive and antisocial child who is unable to be managed in a regular classroom setting (child psychatry).

(I) Hyperactivity ; -

Parents report that from an early age the child always seemed to have an unusual amount of energy , less need for sleep than his sibs and he wore out shoes , clothes , bicycles , ... faster than other children.

Parents and teachers note fidgetiness , inability to sit still for any length of time , talking a great and inaBility to keep his hands to bimself(child psychatry)

Motor hyperactivitg is seen in many but not all MBD children for this reason , the phrase hyperactive child syndrome is inoccurate and at times misleading. Some MBD children are normoactive or hypoactive. The hyperactivity when present is often a striking sign and one that is manifested from early childhood. The child is described by parents and teachers as always on the go , driven like a motor .

Quantitatively the degree of activity is greater than of othef children . Also , the activity is relatively continuous and not turned off in appropriate sitnation such as school or due to social limits . Thes child is unable to inhibit his respons to any stimulus that comes along , regardless of appropriate meaning or significance .

The hyperactivity diminishes with age and may be absent , although the other signs may still be present after puberty (Manual of pychatric therapentics) .

- Weiss et al used 5 selection criteria for "hyperactivity :

1) restlessness and poor concentration were their main complaints had been present since the earliest years.

2. the complaints were a major source of prdilems both at home and at school.

3. all children I . Qs above 85 .

4. None of the children were pychotic , borderline psychotic, epileptic or had cerebral palsy.

5. all children were living at home with at least one parent.

It seems that the major selection criteria concerned chronic restlessness and poor concentration both at home and in school.

The term " hyperactivity " suggests increased motor output. Recently however , there has been a growing awareness of " hypoactive - hyperactive " children. These youngsters are distractible , impulsive , poorly organized yet underactive . Paradoxically , some children with hyperactivity may exhibit appropriate quantities of activity What is claar is that we need to consider the quality or goal - direetedness of activity rather than its overall amount . Many of these children are not energy efficient. Their activity is misdirected , purposeless , fidgety and seemingly random. This is an important distinction, since there exist youngsters who are restless and over-active but purposeful and selective . Such efficient

children should not be confused with " hyperactive " youngsters (Amj.Dis . child , April 1980) .

Anumber of methods to quantify activity level have been tried , these include , the use of ballistographic , mechanical , Photoelectric and ultrasonic devices (Foskee 1958 , Sprague and Toppe 1966 , Sc Schulman & Reisman 1959 , Bell 1968 , Ellis & Pryer 1959 , Mc Farland et al 1966) , telemetry and motion pctures (Davis et al 1969 , Herron & Ramsden 1964, lee & Hutt 1964), and direct observation and ratings by observers (Doubros & Daniels 1966 , Hutt et al 1966 , Qunsted 1955 , Patterson et al 1965). Unfortunately results have been inconclusive and there is serious question whether hyperkinetic children actually have a clearly greater amount of daily motor activity or a different type of motor activity than nonbyperkinetic children (child psychatry).

(2) Distractability & attentional deficits.

Distractability and a short attention span are more noticeable in the school but are usually reported by parents also .

Teachers and parents report that , the child has difficulty with stick - to - it iveness both in play patterns and at school work - this symptom may be the the sine qua non of the syndrome (Manual of psyahatric therapentics). The typical child is unable to persevere with classwork and homework, frequently daydreams, is easily distracted from projects by extraneous stimuli, and is unable to listen to a story or take part in table games for any length of time (child psychatry).

Many authors have blieved that poor selective attention is the most pervasive common denominator in the population.

The American Psychiatric Association lists a diagnosis of Primary Attentional Disorder . Problems with selective attention are likely to find expression in high levels of distractibility , confusion over foreground and background (either visual or auditory or both), a tendency toward the free flight of ideas (i.e. free association and daydreaming), and a propensity for incidental learning. The latter involves the indiscriminate absorption of a great deal of irrelevant information , without learning in a facused manner at the right time and in the right place . (Am.j.Dis

child , April 1980) .

- How does the attentional deficit in the yyper-active child manifest itself ???

- The hyperactive child is frequently delayed in the acquisiton of the fundamental academic skills of reading and spelling . There is a consensus among educators and clinical psychologists that attention is important in the learning process even though there is great difficulty in defining and measuring attention . Children with an attentional deficit and easy distractibility (a corollarg of short attention) have problems focusing on the pertinent discriminatory cuss encountered with every new word or phrase and fail to make effective use of their intellectual potential . Unfortunately , it is overly simplistic to attribute the academic struggles of the byperactive child solely to the attentional deviance . Douglas, for example,states the hyperactive child's less reflective, more impulsive cognitive style may be responsible for many of the eductional difficulties.

- In some of these children , attentional problems

are compounded by concomitant language or perceptual disorders such as visual or auditory processing abnormalities (i.e. learning disocrders). Others may be unusually clumsy and demonstrate " soft " neurological signs . To complicate things even further many of these children may show a variable degree of emotional overlay . These additional factors marrant consideration in the assessment of unexpected school failure. However, it is essential to make the distinction between the attentional deviancy on which the decision to use a trial of stimulant medication should be based and the associated perceptial neurological or cognitive abnormalities that often cloud the issue(Am .j. Dis. child , Afril 1979).

- There are numerous pychometric tests that purport to measure attentional factors . Afew such as the Continuous Performance Test and the Porters Mazes , have enjoyed limited

clinical application .

- Recently there has been considerable interest in the term " attention deficit disorder " . This too many turn out to be an overly inclusive categorization . We have suggested one approach toward the differentiation among children thought to have attention problems.

  - Some children seem to have primary attention deficit . They are thought, on a clinical basis to have relatively " pure " problems with selective aa attention , a primary constitutional disorder in the C.W.S. "Circuits " , yet it must be emphasized that, even within this group, there is considerable symptomatic heterogeneity. e.g some such children may have predominant impulsivity , others sleep. arousal

problems, whereas others primarily have a high level of distractibility.

- Another subgroup have <u>secondary attention deficits.</u> These children are likely to manifest many of the smae symptoms as those with primary attention deficits , but their inatteution is secondary either to an information processing problem (such as a receptive lang uage disability or a disorder of short term memory) or , alternatively , to significant emotional preoccupations and anxieties . Children with information processing problems may " tune out " and become inattentive , fidgety , and impulsive as a response to the futility of struggling to decode words or perceive symbols. Children with serious psycho social problems may be " drained " of attentional strength because their thoughts are elsembere .

- Situational inattention is a less pervasive form of attention deficit which is situation specific in that it is likely to be the result mismatchings between external expectations and a child's characteristics . An incorrect school or classroom placement may precipitate inattention or a child whose home value system and cultural milieu differ significantly from those in the school may become inattentive and disorganized in the classroom .

- Finally , one must acknowledge the existance of mixed forms of chronic attention deficit. Some children may have primary weaknesses of attention accompanied by learning disorders and awxiety. Some , also will have situational inattention as they are placed in classrooms that may not meet their needs. Abasic differentiation , such as this , can be important in educational

planning and in the design of studies of natural history as well as for intervention . (Am.j.Dis child , April 1980).

- The final point to he made about attention is that it is a developmental process. Statements about the attentional abilities of a particular child must be related to his or her chronological age and developmental level .

- Also , there is significant variability in the rate of attentional maturation , with some children progressing more slowly than others. This is frequently referred to as addevelop-mental lag and may explain why a 5 or 6 year old child entering school may display a short attention span , distractibility , and failure to concentrate on a task , but by 10 years of age , the smae child may be achieving at grade level with spontaneous improvement in

in most of these traits . Unfortunately , children with a developmental lag in attention who later " catch up " are in the minority . For most hyperactive children , a chronic course with persistent social problems is more typical . (Am.j.Dis - child April 1979)

- Furthermore , there is now evidence to indicate that while the overactivity may diminish by adolescence , the basic attentional deficit may persist , a fact that has significant implication for treatment duration (Am. j.Dis child , April 1979).

(3) Impulsivity.

Impulsivity is shown by such behaviors as jumping into the deep end of a swimming pool without knowing how to suim , running into the street in front of cars , climbing out on to high roof tops

and leges , and blurting out téctless statements (child psychatry)

The hyperhinetic child is very frequently impulsive . The sout of impulsive behaviour that is socially offensive chagnes as a function of age . In to ddler and preschool years , it may be his tendency to sphincter " accidents " . In elementary school , it may be his rushing aff pursuing his own interests , irrespective of those of his teacher (which are , in fact , usually opposite in kind) , and in preteen and adolescent years , it may be acting out or anti-social behavior including stealing , drug abuse or sexual promiscuity . (Manual of psychatric therapeutics).

It has been reported that children with hyperactivity seldom are reflective . They tend to be chronically impulsive . This may be

seen in their over all behavior , in their social interactions and in their efforts at problem solving . They tend not to reflect , plan , organize or monitor their own productions . Many such youngsters feel very much out of control . Their impulsivity is constantly getting them into trouble . Often , they seem not to believe what they have done , feeling unaccountable for their unpremeditated acts .because things seem to happen so fast (Am.) dis. child , April 1980)

(4) Excitability

The excitability of the hyperkinetic child is manifested by temper tantrums and fights over trivial matters , law frustration tolerance and a tendency to become overexcited and more active in stimulating situations , especially in large group of other children (child psgchatry)

N.B . These symptoms of : hyperactivity , distractibility , imprlsivity , and excitability

have been consistently reported (werry 1968, stewart et al 1966 , Q'Malley & Eisenberg1973) and be considered as the cardinal symptoms of the syndrome.

- Many investigators feel that short attention span and distractibility are the essential features of the syndrome , with byperactivity being a more variable symptom.
- Distractibility and attention deficit has been viewed both as a bock of stimulus inhibition and as a stimulrs - seeking behavior (klein & Gittelman - Klein 1975).
- There are often other manifestations that are often but not necessarily associated with the hyperbisetic syndrome e.g.:

(5) Antisocial behaviour :

It was originally thought that aggressive antisocial behaviours were a necessary component of

the hyperhinetic syndrome and it has been syggested that the hyperkinetic syndrome is not distinct from other conduct disorders .

Careful clinical studies reveal that only a small but significaut minority of hyperkinetic children pi esent with outisocial behavior when initially seen .

Antisocial behaviour is more frequent in order hyperkinetic children , it may develop as a secondary reaction . Children who are unable to succeed in an academic setting , who are unable to develop satisfactory peer relationship , who find rejection at home and at school are hikely to become aggressive and rebel agaenst the values of society.

(6) Cogonetive and learning disabilities

Many - but by no means all - children with symptoms of hyperactivity also have learning

disabilities . However , the nature and prevalence of these difficulties remain unclear .

These may range from problems with visual - spatial orientation to difficulies with the process- errg of sequentially presented information to specific language disabilities.

Often the information - processing problem in itself is a disorganizing influence , impairing attention , precipitating impulsive behavior and contributing to the child's poor self - esteem. Some youngsters said to be hyperactive , also manifest said to be hyp ractive , also manifest significaut clelays in gross and / or fine motor function and visual motor integration .

Again , such associations are by no means invariable .

Overall , academic achievement is usually low for hyperhivetic children (kaogh 1971) but some writers attribute this solely to low intellectual

But an appreciable fraction of children with byperk-inetic syndrom show abnormalities of perceptual performance on certain psychological tests and impaired learning in school even in the presence of a normal intellegence quatient (I.Q).

(7) Other emotional symptoms

Many hyperbinetic children show abnormalities in that sphere of behaviour loosely designated as " emotional " . In general , somechildren show age in appropriate characteristics of younger children , including affective lability , a short temper and a low frustration tolerance .

The most significant symptoms are depression and low self esteem which occur in the majority of hyperkinetic children (wiss dal 1971) This has been viewed as a reaction to continuing failures and also a " depressive equivalent " .

It is not sivqrising that children who endure academic failure , adult disapproval , peer rejection and loss of control are likely to acquire secondary emotional problems.

Hyperkinetic children typically show alinormalities in interpersonal behavior between themselves and their peers and between themselves and adults. With peer , the hyperhinetic child is characteristically immature , bossy and dominating . As a result, he freequently has few friends.

The hyperkenetic child is outgoing and extraverted , he seeks friends but loses them . Because of his unpopularity and need to dominate, he may choose to associate with more complaint associated , with younger children or if a boy with girls (Uanual of psychiatric therapentics)

Children said to have hyperactivity are

described as " emotionally labile " i.e. easily set off to layghter or tears . Accompanying their substantial arrays of inconsistent behaviors is a tendency toward capriciousness of mood or affect. Their behavior may wary from monment to moment , their personalities seeming to change with little provocation or justification. Wide nood swings are common and difficult to account for (Am.j.Dis . child , April 1980)

(8) Neurological Signs

Some hyperhinetic children present with less well - defined disorders manifested by more subtle neurological signs , sometimes called " soft signs ". These signs may only occasionally be associated with actual damage to the brain (Rutter 1968) . However, large percentage of hyperkinetic children don't demonstrate even these subtle neurological signs.

These minor neurological signs including associated movements, dysdiadochokinetic movements and other indicators of neuromaturational delay . It may well be that one subset of children with problems of attention and activity actually manifest a delay in the maturation of C.W.S. (Am . j.Dis. child , April 1980).

Approximately half of MBD. children show some abnormalities of co-ordination. These may be in area of fine motor co-ordination , the children showing difficulty in learning to tie their shoelaces, in cutting with scissors , in coloring and later in handwriting.

These difficulties may also be in the area of gross balance , so that the child has difficulty in learning to roller skate or ride a two - wheeled bicycle . Finally , they may be present in the area of hand - eye co-ordination so that the child is inept

in sports requiring the throwing , catching and kitting of balls.

N.B: a) Not all the phenomena described are always seen together . There may be just one or two of these characteristics .

b) From a clinical & standpoint , each child needs to be assessed as an individual person rather than as a representative of a syndrome. His or her uniqje array of traits will be the major determinant of therapy , of educational planning , and of the type of counseling and anticipatory guidance .

- Aetiology of the hyperkinetic behavior disorder:-

The hyperhinetic syndrome is child psychiatic disorder of multifactorial origin (childpsychatry)

There are a variety of theories that attempt to explain the origns of the syndrome . Present evidence suggests that the tern hyperbinetic syndrome describes a heterogenous group of children with different aetiologies. In some cases , the disorder may be due to :

- a structural abnormality of the brain(werry 1972)
- an abnormality of physiological arousal of the nervous system (satterfield et al 1974) .
- Agenetic basis for the disorder (cantwell 197).
- in others , there may be still undiscovered important aetiological factors.
- The hyperhinetic behavior disorder was thought to be a disorder secondary to intrauterine , obstetrical or postnatal troubles or perinatal complications .

- Prenatal causes: metabolic , genetic, toxic or psychogenic .
- Perinatal causes : prematurity , postmaturity , prolonged labour , accidents during labour , rapid labour , abnormal presentation , induction of labour , effects of medications during labour, immunological incompatibility, normal mechanics of labour e-g first born male more susceptible to developing sequelae.
- Post -natal causes : - up to 5 years e.g. infections , injuries to the head, medications, poisons , toxins , metabolic disorders , vascular diseases , psychogenic and environmeutal factors as inadequate , excessive or distorted stimulation and home interaction may have an effect on the developing C.W.S. and lead to the development of one of the syndrome of cerebral dysfunction , neoplasms , convulsious.
- Other causes of the syndrome in children include:

enotional disturbances , disrupted family life, cultural factors (early environmental influences), and rarely organic medical disease such as hyperthyroidism or rheumatic chorea ; (essential neurology).

- The genesis of the disorder is uncertain some deny that it is due to brain damage & suggest that it may be either biochemical in origin or may reflect a disturbance of maturation. Others regard, it is a wild form of cerebral palsy (clinical psychiatry)?

- There is some evidence to implicate heredity in the etiology of the syndrome . Any genetic theory must explain the marked male preponderance (about 7 : 1) and the relativily high incidence of hyperactivity in the fathers of these children.

- Two adoption studies lend credence to genetic transmission in high risk families, while

family studies have shown a high incidence of alcoholism , sociopatly and hysteria in the parents. Though non of the data are conclusive, they are highly suggestive of a genetic role.

- Rutter's monograph children of sick parents demonstrated that children with a psychiatric disorder were more likely to have parents with a psychiatric illness than were children with organic forms of illness(Brit.j. Psychiat.1977)

- There is increased clinical awareness that all family members are likely to be involved when one of them presents as a patient and that this is particularly so where distarbances in young children are concerned , so that the interaction between parents and children must be considered in the treatment of either group. (Brit.j.psychiat. 1977).

Some investigators have attempted to identify a biochenicel basis for the syndrome . Several lines of

evidence appear to link behavioral dysfucntion with central catecholamine neurotransmitters , particularly dopamine and norepinephrine (amphetamine inhibit catecholamine uptake by dopamine neurous & norepinephrine terminals in the brain).

If catecholamine are indeed caus ally linked to hyperactivity , it still remains to be determined whether the abnormality is due to constitutional or environmental factors.

The issue of food additives deserves mention , in hight of the public attention given the Feingold diet. Feingold's hypothesis is that : the artificial food coloring and additives that are prevalent in contemporary American diets lead to hyperactivity in susceptible children and that elimination of these additives from the diet will alleviate the symptoms. The Feingold diet (or K.P. diet) is very appealing to many parents as an alternative to medication and

there are numerous anecdotal reports of " cures " resulting from the diet .

It has been claimed that hyperkinetic children suffer from vitamine deficiency , allergy to certain food additives and disorders of glucose metabolism (hyperglycemia).

Incidence : -

Hyperkinetic syndrome is more common in boys than girls the boy : girl ratio varied from 4 : 1 to 9 : 1 .

The prevalance in the population is hard to specify because differing diagnostic criteria have been employed , methods of investigation and population studied.

Hyperkinetic impulse disorder may have its onset in the earliest days of life . In other instances , however , some manifestations may await the provocative rigors of school. In addition , the symptoms may be situation - specific and may not be evident in every setting.

The order of magnitude would seem to be between 3 % and 7 % making it a common pychiatric problem .

From 5 to 15 % of the child population is estimated to suffer from this problem in North America , although in England the incidence is considerably lower (essential neurology 1978)

Arecent special panel of the office of child development (Freedman 1971) estimated that approximately 3 % of all schoologe children exbibited hyperhinetic disorders. An even larger percentage of children with classroom adjustment problems (perhaps 15 % of schoolage children : la veck , 1970) may be suspected by teachers or parents to suffer from this problem (the practice of pediatric newrologg).

Its incidencd is estimated at 5 % of all primary school children (principles of pediatrics).

Pathology of hyperkinetic syndrome :

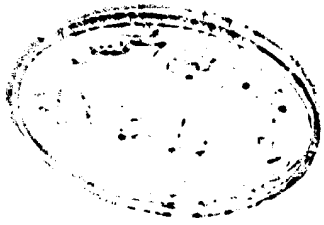
It is very popular to day to make the diagnostic inference of brain damage to explain entirely or in part the deviaut behaviour of many children this concept have arisen from the association of several behavioural patterns with anticident cerebral pathology as encephalitis and head injury .

A syndrome very similar to hyperkinetic syndrome followed typical attacks of encephalitis lethargica so that kohn & coha (1966) considered byperkinetic syndrome to be the result of a subacute encephalitis affecting the vrain stem & basal ganglia .

Also , individuals with Parkinsonism and in animals with experimental lesions in brain stem tegmentum which induce tremor, hypermotility a profound depletion of catecholamines has been demonstrated . It is then of special interest that a potent sympathomimetic amine a ampletamine " is often suggested the

most effective agent for ameliorating the pathological hyperactivity of young children with behaviour disorders.

In fact , in some cases , there is unquestionable evidence of cerebral damage , but in the majority of cases the inference is not substantiated by in frobehavioural clinical or laboratory findings.



Pathogenesis of Hyperkinetic disorder :

The basic underlying mechanism is not known . In the course of their development , hyperkinetic children outgrow their made of behavriour . This may be consected with the inter - relationship between the diencephalon , with is probably fully formed and in full functional integrity at birth and the cortex which is by no means fully formed at birth , but continues to grow at least beyond the 5th year of life and possibly to adolesceuce.

There are many theories that describe the pathogenesis of hyperkinetic disorder .

1) One has suggested the reverberating feed - back type of circuit between cortex and diencephalon , This postulates that , as the cortex grows in mass , it is eventually able to exert a greater influence and allow for the more organized , localized and

discriminating responses characteristic of growth and for the ability to inhibit which is one characteristic of maturation .

2) Other theories have stressed on the role of the diencephalon as the rostral componeut of the reticular activity system & its possible role as a first stage sorting , routing , gathering mechanism for impulses coming in sensory receptors to the various higher levels of the C.W.S. It has been suggested that in the 1st few months after birth the newborn infant operates under a homeostatic principles that induces great discomfort when any tension accumulates with a greater need to discharge this tension & return to the previously undisturbed state . Thus in case of dysfunction of the diencephalon the evdividual is unusually sensitive to stimuli flooding in from both peripheral

receptors & viscera . This could make a young infant respond with greater than usual urgency to what might otherwise be regarded as a normal amount of tension coming from the usual organic sources as hynger or full bladder & be hypertonic & irritable.

3) Others have proposed that the rostral portions of the reticular activating system , other the diencephalou are concerned with ability to respond differentially to stimuli & to inbibit, to establish , to alter and all of which seem important in the production of this syndrome.

Diagnosis of the hyperbinetic syndrome :-

Since it is a behavioral syndrome , it is appropiately diagnosed by : -

I. A full history and behavioural observation which are of prime importance . Other diagnostic procedures are anciillary , often helpin to preclude other undetected problems .

so , the morhup must be comrehensive and cover : medical , social , educational and psychological factors e.g. :

- an accurate developmental and social history from the parents dating back to infancy and history of any chronic behavioral deviance.
- an accurate school reports on the child's behaviour from the teacher or day care centre staff .
- academic performance of the child.
- carful investigation of child's family as these children often have alcoholic , sociapathic or inadequate parents.

The parent is usually the best source for the patients long term history. Teachers, however have demonstrated remorhable sensitivity for systematic observation of the suspected hyperactive child's behaviour. Parents appear to lack this sensitivity or perhaps the home environment substantially reduces the stress imposed on these children so that the degree of restless behaviour is reduced.

It is important to specify what the parents or school mean by the word "hyperactive". The history taking should be directed at specifying key temperamental traits such as attention span, distractibility, impulsivity and excitability.

Behaviour rating scales such as the one developed by "Connors" are helpful in this regard "shown in appendix D".

The importance of detailed history results from the fact that the majority of hyperkinetic children behave differently in different setting. These children are most severely stressed when they are expected to

stay on a task over relatively prolonged periods and particularly in a situation where there are multiple stimuli. The average classromm fits these conditions perfectly. In the classroom, the hyperkinetic child may be in perpetial motion. These same children in the physician's office often behave in a very contr-olled manner. Physicians considering medical treat-ment for only those children who are obviously hyper-active during an office or clinic visit may be missing a substantial number of children with this syndrome who might benefit from pychoactive medication.

Any child who has mainfested chronic behav-ioral deviance either at home, with his peers, or in his school or who is showing inadequate school perfor-mance despite the presence of normal intelligence, adequate teaching and adequate nutrition must be sus-pected of having MBD.

II- Vision and hearing tests: should be routinely available before further evaluations are under-taken.

III- Physical examination : is usually normal in hyperkinetic children but may be defects of vision or hearing or abnormalities of speech (Hirsch 1973).

One group of investigators (Waldrop and Halverson (1971) has reported a high incidence of minor physical anomalies such as : widely spaced eyes, curved 5th finger, adherent earlobes esp-ecially in boys, large head size, high palate, slightly misshaped ears.

Reported et al. (1974) not only confirmed the presence of these physical anomalies but showed that the presence of these anomalies was associated with :

- Severity of hyperactivity.
- A history of hyperactivity in the father.
- A history of early obstetrical difficulty in the mother.
- A higher than normal "mean plasma dopamin-B-hydroylase activity.

- Hyperkinetic children with minor physical anomalies may form a distinct subgroup.

IV- Neurologic examination: Despite many arguments over the validity and reproductibility of "soft neurological signs, there seems to be little doubt that children with hyperkinetic have a higher incidence of these findings.

The clinical significance of these neurological findings is unclear and this information is not very helpful to the physician or educator in planning remediation.

Neurological examination may be negative or show a variety of soft signs e.g strobisms, facial weakness or mixed dominance, sensorimotor incordination e.g slight clumsiness or awekwardness, particularly with hand movements, inability to maintain a steady posture of the outstretched arms, the presence or absence of lateralization.

V - Psychometric testing: is desirable in most children who are experiencing difficulties in school. It

is useful to have some measure of academic achievement such as the Wide Range Achievement Test or Peabody Individual Achievement Test.

Measurment of I.Q is needed; Wechsler Intelligence Scale for children and the Standford - Binet Tests are standards. N.B: it is important to stress that there is no specific test or pattern of scores that is diagnostic for hyperkinetic children.

VI- Electro-encephalogranis (E.E.G.): Usually a number of suspected hyperkinetic children will have diffusely abnormal E.E.Gs. but these should be obtained only to detect a seizure pattern suggested by history (principles of pediaterics).

Clinical experience would suggest that E.E.G. is of limited value in the assessment of hyperkinetic syndrome unless a seizure disorder or degenerative process is suspected. Overall, the E.E.G. usually gives the physician very little additional information (Am. J. Dis. child, April 1979).

In should be apparent the there are no absolute diagnostic criteria for hyperkinetic syndrome and the most important point in the diagnosis is a full history and behavioural abservation of the child.

Differential diagnosis of hyperkinetic syndrome :

The conditions that may produce or be associated with hyperkinetic disorders are :

1. Mental reatrdation.
2. Brain damage or brain dysfunction syndromes.
3. Seizure disorders.
4. Developmental hyperactivity.
5. Environmental causes.
6. Childhood autism.
7. Progressive neurologic or metabolic disorders.
8. Deafness.

1. Mental retardation : (M.R.)

M.R. in children refers to a condition of decreased intelligence (I.Q. under 70) that leads to adeptive difficulties in many areas of school and social performance.

These children are usually hyperkinetic because they are placed in situations that require attentional and learning performance beyond their capabilities.

In mental metarded children, learning difficultiesl result from intrinsic limitations of intelligence but in hyperkinetic children, selective inability is due to sustain attention interfering with entry into learning-teaching process.

A careful developmental history will often provide supportive evidence for the diagnosis of M.R. by revealing delayed development in acquisition of speech and motor skills. A reported of delay in unaided walking beyond 18 months of age is closely correlated with the presence of a major defect in mental or neurologic functions.

Continuing inability to develop peer relationship is suggestive.

Administration of one of the standard intelligence tests e.g the Wechsler Intelligence Scale for children (WISC) which has the advantage of being divided into verhal and performance sections yielding separate scores. These give some indication of the presence of selective motor or language disorders.

The Stanford Binet test is often utilized for children under the age of 6 years.

The final diagnosis of M.R. should be based upon a judicious consideration of developmental and historic information, data from psychometric testing, the physical examination and awareness of environmental factors and studies and observations of these children.

2. Brain damage or brain dysfunction syndromes :

These syndromes characterized by : restlessness, insomnia, irritability, distractibility and affective disturbance, choreiform movements, tremors and tics. These signs gradually diminshed with time but many children never returned to their premorbid personality.

The original discriptions of brain damaged children pertained to rather severely affected children who often manifested overt neurologic abnormalities in addition to behavior disorders. Later, however the concept of organicity was

extended to include many children with borderline neurologic abnormalities.

Many children with learning disability and and hyperactive behavior do not have brain damage that can be diagnosed by : history, neurologic examination or laboratory techniques.

3. Seuzure disorders :

This occurrence of seizures in children may overshadow the behavioral and learning disordeds that often are present in epileptic children and that may affect their lives more severely than the seizures themselves.

One report indicated that 42% of children with seizure disorders attending ordinary school were judged by their teachers to be markedly inattentive (Quoted by Stores, 1973).

The hyperkinesis seen in children with seizures is most often another manifestation of their brain disorder along with the seizures and possible learning difficulty.

Young children with epilepsy are particularly proneto hyperkinesis as are children with temporal lobe epilepsy. The hyperkinesis may be unrelated to the frequency of clinical seizures, in fact, if seizures are controlled with sadative anti-convulsants such as phenobarbital, hyperkinesis may be inversely related to seizure frequency.

The occurrence of paroxymal discharges in the E.E.G. of children with hyperkinetic disorders has often been reported without clinical histories of seizures. The E.E.G. abnormalities represent a subclinical form of epilepsy.

4. Developmental hyperactivity :

The essential elements of this condition are the presence of hyperactivity, beginning in the first years of life, in a child who is otherwise mentally and neurologically intact.

Parents may have regarded the restless, inquisitive, impulsive behavior of their child as signs of a vigorous peronsality but these traits

become a handicap when the child is expected to conform to classroom restrictions.

Male preponderance is as high as 90%.

Hyperactivity usually diminshes with age but may be replaced by antisocial behavior if the child has failed to enter into the academic learning process because of hyperactive behaviour.

5. Environmental causes :

Lebeling a child as hyperactive implies that the child has adapted poorly to the environment. Some environments are so ill suited for a child that some type of abnormal response must be expected. There is confliciting evidence for an increased prevalence of psychiatric illness in families of hyperkinetic hildren. A child who is anxious or fearful because of adverse family circunstances will not be able to learn to curtal impulsive behavior and adopt to classrooms. A child who is hyperactive because of family pressures will ultimately manifest improved behaviour when these pressures are alleviated. It is justifiable to hospitalize a child to evaluate this situation.

6. Childhood autism :

Children with autistic behaviour manifest a behavioural disturbance characterized by lack of affectionate interest in parents, stereotyped behaviours and varying degree of speeck deficits. The nature of the problem of the autistic child continues to elude investigators in this area. These children may manifest continuous activity superficially resembling behaviour of severely hyperkinetic children but different due to their inability to form human relationships. Seizure disorders are commonly found in autistic children. These observations indicate that at least some forms of autistic behaviour result from brain damage perhaps involving cerbral areas concerned with personality development.

Autism has been regarded as a learning disability involving the inability to develop interpersonal relationship or indicative of the presence of global perceptual dysfunctions. Many autistic children become severely retarded functionally

while others may develop sufficiently to make marginal adjustments in classroom distuations. Their unusual behaviour may perplex teachers and result in referral for hyperkinetic problems.

7. Progressive neurologic or metabolic disorders :

These conditions are rare in children presenting with hyperkinetic disorders. There are a number of degenerative neurologic disorders whose onset may be heralded by the appearance of emotional disorders during childhood. The perceptible worsening of emotional lability, movement disorders or inco-ordination in a child without obvious environmental cause should raise the question of a progressive neurologic disorder. Early diagnosis of these disorders will provide information regarding the outlook for the affected child and permit the family to plan in a realistic manner,

Genetic counseling is essential for families of children affected by degenerative diseases of the nervous system e.g :-

- Huntigton's chorea : hereditary disorder.

- Dystonia musculorum deformans : basal ganglia disorder.
- Subacute sclerosing panencephalitis (Dawson's encephalitis).
- Hyperthyroidism.

Prognosis :

Early investigators thought that the hyperkinetic syndrome was a time limited condition which disappeared as the child grew older.

Sonce symptoms of the syndrome as hyperactivity may diminish with age at adolescence and may be absent while the other symptoms may still be present.

It appears that distractibility persists and that there is an increased incidence of adjustment and behavioral problems in the teens. The value of drugs in preventing this aspect of the problem is still quite uncertain.

In its severe forms, hyperkinetic syndrome may be the forerunner of a number of personality problems, including sociopathy. It is now seems that the prognosis for untreated hyperkinetic children may be quite poor. It is a frequent cause of school dropout.

The study by Weiss et al. (Am. J. Dis. Child, April 1980) in consistent with several previous retrospective and follow-up reports, which suggest

that : those younsters who are identified as hyperkinetic are at risk for a wide range of problematic adolescent and adult outcomes. It is notewortly that these sequelae impinge on areas beyond those linked to formal classroom preparation. Automobile accidents, difficulty with the law, drug and alcohol abuse and other forms of life instability may be common phenomena.

Both retrospective and prospective studies indicate that antisocial behaviour, educational retardation, depression and depression and psychosis are prevalent in "grown up" hyperkinetic children.

Anterospective studies by Weiss et al. (1971), Mendelson et al. (1971) and the Montreal group (1972) show that : "hyperactivity per se diminshes with age but the children are still more restless, excitable, impulsive and distractible than their peers. A ntisocial and concentration difficulties remain an major problems. Chronic, severe underachievement in school in almost all academic areas is a characteritic finding, low-self-esteem, poor self-image, depression and a sense of failure are common.

While none of these findings in conclusive, they strongly suggest that the adult outcome of children with they hyperkinetic syndrome is likely to be as poor as it is in adolescence.

Treatment :

The issues in management of a hyperkinetic hild are divided into three sections:

1. Treatment of the child includes behaviour therapy and drug therapy.
2. Help for the parents.
3. Environmental manipulation includes the previon of a suitable school environment.

I- Parent counseling :

Successful management of the hyperkinetic syndrome required involvement of the entire family. Some families may require counseling services, and selected children may require referral to a psychologist or a psychiatrist for more intensive psychotherapy.

Parents have been helped to deal more effectively with their hyperactive children through behaviourally oriented programs. This is especially useful in assisting parents to set limits and in facilitating more positive family interactions.

Parents are taught the nature and phenomenology of the syndrome, the basics of behaviour modification and the principles of structuring the child's environment so that there are regular daily routines and firm limits of his behaviour. The importance of avoiding overstimulation, excessive fatigue and situations known to cause difficulty are emphasised.

Videotape playback of parent-child interaction and of maladaptive behaviours with explicit instructions to the parents on how to deal with them has been found to be helpful.

The use of brothers and sisters to modify behaviour of their hyperkinetic siblings is a promising new technique.

The presence of psychopathology in the parents may require individual treatment of the parent and/or a more dynamically oriented family therapy approach, particularly if the hyperkinetic child has been the "family scapegoat".

The physician must explain to the parents what has been concluded from the examination. If there is no evidence of overt neurologic impairment, this fact should be clearly stated. E.E.G. findings should also be communicated to the parents. It should be explained that borderline E.E.G. abnormalities are of no clinical significance.

If the child's intelligence is within normal range, parents should be apprised of this fact even if it appears self-evident.

It is also helpful to communicate findings directly to the child since he or she may be anxious about the presence of physical or mental abnormalities.

Psychologic treatment needs to be focused on disturbed family interactions mother than exclusively on the symptomatic child.

II- Behaviour therapy :

It is a rapidly growing area of interest that modifies child behaviour by arranging environmental rewards and punishments to encourage desirable behaviours in the child. The physician should either provide the detailed attention to the child's enironment required for this approach or refer the family to competent professional individuals in the community who use this approach.

A number of standard instructions for monoging the hyperkinetic child can be kept in mind. A parent can be told that hyperkinetic children require more structure in their daily activities than other children. Too many variations in the daily routine may be disadvantageous to the child. Firmness and consistency should be stressed but uncontrolled punitive reactions of parents should be avoided. Rewards for good behaviour and restrictions for bad behaviour should be prompt and without excessive discussion or lecturing to the child. The parent should be alrt to signs of fatigure or excessive

stimulations when arranging the child's daily routine. Success in this area will greatly depend upon the parents mental equilibrium and ability to tolerate the vagaries of behaviour of the younger school-age child.

A daily reward system was instituted in which the parents gave preselected reinforeers to the child at home if the child achieved certain predetermined goals in school. Each teacher gave reinforcers in the classroom and sent home a note each day the criterion remard was fulfilled.

Significant improvement occurred in all children as judged by variety of rating and observational measures.

III- Educational management :

Each year a child spends about 1400 hours out of 8760 in school. Thus it is important that there be consistency of expectations and methods of behavioural reinforcement between the home and the school (child psychatry).

The special educational approaches available to parents of hyperkinetic hildren are : individual tutors, special classes within regular schools, and speical schools (practice of psychatric neurology).

Individual tutorial instruction offers the most flexible means of supplementing school instruction. A skilled tutor may do a great deal to increase a child's motivations to learn. Parents are usually poor tutors. Parents should be strongly urged to avoid playing the tutorial role since it often conflicts with the parental role and results in deterioration of the parent-child relationship.

Special classes within regular schools may be offered for hyperkinetic hildren. The disadvantage of such classes is that children are labeled and segregated at a formative age. Also, hyperkinetic hild of normal intelligence may be placed in a class with retarded or severely disturbed children. Part-time placement in special classes may be a useful compromise. However, the decision for placement in special classes is the responsibility of the appropriate

educational authorities. The physician may wish to advise the school but should avoid giving directives that can not be implemented. Physicians must respect the independence of the educator in educational planning just as they value their own independence in medical planning.

There has been a great efforescence of special private schools for children with learning problems. Unformtunately many of these are based on unproved theories of selective training of perceptual and motor skills. Inspection of these facilities will often will often reveal that their common denominator is a markedly reduced pupil-teacher ratio compared to public or parochial schools, the parents of course pay for this benefit with substantial annual fees. Such schools may be essential to a child who is on the verge of total failure in public school systems. It has been stated that primary school classes containing more than ten pupils will inevitably produce rejects from the learning-teaching process. This may be an extreme view but it underscores the importance of

of pupil-teacher ratio in determining effectiveness of teachers who must teach difficult children. Recommendation of a special private school may be appropriate for severely hyperkinetic children when other treatment methods have been unsuccessful.

N.B: Most hyperkinetic children can tolerate and will need to remain in, a regular classroom. Simple classroom measures such as placing the child close to the teacher and away from distractions, and giving one-to-one attention through the use of teacher's aides may be helpful.

For those children with significant learning problems, remedial education based an a thorough assessment is necessary. However, there is little hard evidence to support the efficacy of most special education programms for any type of child. Well controlled studies of special education programmes for hyperkinetic children are few in number and disappointing in result.

IV- Drug therapy :

Medication is of benefit for approximately 75% to 80% of hyperkinetic children. Its effect, though often dramatic, is only suppressive and this may necessitate medication being continued for several years until the child's signs and symptoms are reduced in intensity. In a few instances, the time course involved may be as many as 5 to 10 years. (Manual of psychatric therapeutics).

Drug treatment is the easiest, least-time consuming and most frequently used intervention technique in the management of the hyperkinetic child. Several critical reviews of the voluminous literature on this subject are available.

The drugs of choice are the C.W.S. stimulant drugs e.g the amphetamines and methylphenidate (Ritalin) hydrochloride. Improvement in behaviour can be expected in 2/3 to ¾ of children treated with these stimulants, while worsening can be expected in 5% to 10%. (child psychatry), (Am. J. Dis. Child, 1979). The two drugs act

centrally by potentiating norepinephrine and dopamine at central synapses.

Methylphendiate must be given at least twice a day to ensure an effective dose throughout the school day but dextroamphetamine in the long-acting spansule need be given only once a day. The initial dosage should be the smallest available with a gradual increase either until clinical improvement is noted or until side effects occur which necessitate discontinuation of the drug such as anerexia, insomnia, headache, stomach ache, nausea, tearfulness and pallor, suppression of weight.

They presumably exert their beneficial effect through improving the attention span and lessening the tendency toward an impulsive behavioural style. They are not sedatives that quiet the child at the expense of cognitive performance.

Hyperactive children on medication rarely become drug abusers. A number of other drugs have been used when the stimulant drugs have been ineffective. These include :-

Magnesium pemoline (cylert) : a weak, long acting C.N.S. stimulant, indicate that it decreases hyperactivity and produces improvement on the Performance Scale of the WISC. It is an alternative to methylphenidate. It has the advantage of being long acting, therefore the child does not have to take medication at school and is not subjected to fluctuating drug levels. A major disadvantage is that it is more difficult to assess response to medication since it takes several weeks to take effect (Am. J. Dis. child, April 1979).

Daenol (Deaner): is a C.N.S. stimulant but it is of little or no value in the treatment of hyperactive children.

Cofee (with caffeine the presumed active ingredient) has been reported to be as effective as methylphendiate in one study (Schnackenberg 1973).

Tricyclic anti-depressants :

- Amitriptyline hydrochloride (Elavil).
- Imipramine hydrochloride (Tofronil).

They appear to act similarly to stimulants by potentiating central catecholamine transmission.

Tofronil in a dosage of 50 to 175 mg/day has been found to be effective with 45% to 85% of hyperactive children. They are not harmless agents, however, and can be extremely toxic if injested in excessive quantities. Because of this serious toxic potential, it is inappropriate to routinely prescribe tricyclics for a hyperactive child who also happens to wet his bed at night in the hope of treating both the hyperactivity and enuresis.

It is not given to children under the age of 12 except for ensuresis and there are recent reports of E.C.G. abnormalities in children treated with tricyclics.

Sedatives such as phenabarbital are usually contraindicated for hyperactive children.

Antianxiety agents are poorly controlled and the findings are contradictory.

Antipsychotic drugs e.g chlorpromazine, thioridazine (Melleril).

They often will quiet a grossly hyperactive or aggressive child.

Phenothiozine drugs : Thioridazine (Melleril) is the most effective used with hyperactive children, although it has been used primarily in those who are also mentally retarded or brain damaged. By and large the phenothiazines when used alone are not as effective and are potentially more toxic than the stimulant medications, melleril is a less toxic agent than chlorpromazine; 0.5 to 1.0 mg/Kgm/day may be given in divided doses.

Antihistamine diphenhydramine (Benadryl) has been suggested, its efficacy has yet to be demonstrated.

Anticonvulsants : are useful in the treatment of children with fits but there is no evidence of their value in the absence of seizures even if the E.E.G is abnormal.

Lithium carbonate : has been tried with varying success by several investigators but it is not as effective as the stimulants. In the extremely rare case of mania presenting with hyperactivity in a prepubertal child, it may be the treatment of choice.

N.B: It is important to stress one final point; whatever treatment modility is utilized, the physician must closely follow the child's progress. As with any chronic problem in medicine, treatment and progress need to be assessed at periodic intervals to meet the changing needs of the developing child. This applies not only for drug management but for all elements of the treatment program (Am. J. Dis. Child 1979).

V- Individual psychotherapy with the child :

As with the other psychiatric disorders of childhood, evidence for the efficacy of individual psychotherapy with children with the hyperkinetic syndrome is lacking. However psychotherapy using active techniques such as those developed by

Gardner (1973), is indicated for the secondary emotional symptoms of depression, low self-esteem and poor peer relationship.

The physician should help the hyperkinetic child understand the nature of his difficulties and how medication are intended to help the child help himself.

VI- Surgery :

There are reports of anygdalotomies and sterotactic hypothalamotomy have been used to treat the hyperkinetic syndrome even in very young children.

75% emprovement with little in the way of side effects has been reported. However, this would appear to be adrastic therapeutic intervention reserved only for very sever, intractable cases.

N.B. The child with hyperkinetic syndrome is best considered as a multihandicapped child requiring a multiple modality treatment approach.

Treatment must be individualised and based on a comprehensive assessment of each child and his family.

CHAPTER II

MATERIAL AND METHODS

A. Material:

The material of this study consisted of 30 patients that had been selected from Nabil El-Wakad Primary School.

The selected patients were suffering from abnormal behaviour mainly hyperactivity in addition to more than one symptom of hyperkinetic syndrome. Their ages ranged between 6 - 12 years of both sexes.

Those patients were compared with a central group of 30 children which are completely normal children of same age and of both sexes, from the same school to be from the same social class. They were selected to be free from any neurological signs and symptoms or any past history of convulsions or head trauma or any family history of epilepsy.

In addition to hyperactivity at least more than four of the following behaviour traits were present of moderate to severe degree in each child.

- agression
- anti-social behaviour or destruction
- Pathological variation of mood and behaviour.
- Short attention span.
- Distractability.

- Poor concentration.
- School failure or inadequate school performance
- Low frustration tolerance.

B. Methods:

In both, study and control group, each child was subjected to the following:

I. **Interview with each child** according to the Children Mental Health Card.

II. **Behavior rating scale,** developed by Conners, was helped to identify thechildren with behaviour problems.

III. **History taking from the parents** using "questionnaire to the parents" which was based on "Rutter's parental scales in assessing the deviant behavior in children." The questionnaire is shown in appendix "A". It was containing a list of diagnostic behaviour traits which have been useful in the identification of the hyperactive child and in determining the time of onset of the hyperactivity symptoms and in determining the the family and social factors and their role in aetiology of the hyperkinetic syndrome.

IV. **History taking from teacher** using questionnaire which is shown in Appendix "B" and it included data for detection of any observable deviant behavior in the children at school and the degree of concentration, attention and

achievement in the class and his relation to his peer group.

V. **Psychiatric examination** was done in each case according to a psychiatric examination sheet. This is represented in Appendix "C".

VI. **Physical examination:** All children were examined to rule out any physical illness that may be present and affect the child's behaviour.

This physical examination was including height, weight, hearing, vision,.....

VII. **Then, E.E.G.** was done for (6) hyperkinetic children.

. The apparatus used in the present work was Elema Schnaender electroen Cephalogram, the recording unit was equipped with 16 recording channels. Each comprising an ink oscillograph and a final amplifier. Both unipolar and Bipolar derivations were used. Hyperventilation was routinely used as a provocative procedure.

VIII. **Neurological examination:** was done for each child to notice any abnormality of C.W.S.

IX. **Psychometry:**

The level of mental maturity was measured for every child using Good-enough - Harris Draw- a person Test

Each child was given a pencil and a test blank. The following instructions were given for each child: I want you to draw a picture of a man or a woman, make

the very best picture that you can. Encouragement was needed for many children. There is no time limit to the test, usually it takes more than 5 - 10 minutes. The drawing is then scored not for beauty but for completeness, i.e. more detailed and for placing the details in better relation to each other e.g. attaching the arms to the trunk.

This test was done for each patient and control children, each one separately.

The test gives an idea about the level of mental maturity of thechild which depends on:

a) perception of similarities and differences.

b) abstraction.

c) generalization.

CHAPTER III

RESULTS AND DISCUSSION

Table (1): Past history of diseases among hyperkinetic and normal children.

Disease	Hyperkinetic Children (No=30)	Normal Children (No=30)
Recurrent tousilitis	5	3
Measles	6	2
Fever	3	-
Otitis media	1	-
Bronchitis	1	3
Myopia	1 6/12 6/18	-
Skin allergy	1	-
Fits	1	-
Surgical operation	3	1
Total diseased child	22	9

Table (1) shows that there was increased incidences of diseases in hyperkinetic children than in normal children with statistical highly significant difference of $p = 0.005$.

SOCIAL RELATIONS

Table (2) General interpersonal behavior of hyperkinetic children and normal children.

General Relation	Hyperkinetic Children (N = 30)	Normal Children (N=30)
Extraversion (+ve)	23	28
Intraversion (-ve)	7	2

$x^2 = 3.27$ d.F.) 1 P) N.S.

Table (3) Child-mother relations:

Child-mother Relation	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good relation (+ve)	20	23
Poor relation (-ve)	9	7

$x^2 = 0.44$ d.f. = 1 P = N.S.

Table (4): Child-father relations

Child-father relations	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good relations (+ve)	14	27
Poor relations (-ve)	16	3

$x^2 = 11.18$ d.F. = 1 P = 0.001

Table (5): Child-relatives relations;

Child-relatives relations	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good relations (+ve)	20	26
Poor relations (-ve)	10	4

$x^2 = 3.35$ d.F. = 1 P=N.S.

Table (6): Cuild-teacher relations:

Child-teacher Relations	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good relations	19	27
Poor relations	11	3

$x^2 = 5.96$ d.F. = 1 P = 0.02

Table (7): Child-peer relations:

Child-peer Relations	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good relations	16	25
Moderate relations	13	4
Poor relations	1	1

$x^2 = 7.52$ d.F.=1 P = 0.01

Table (8): Obedience of children to their parents:

		Hyperkinetic Children (N=30)	Normal Children (N)30)
Obedient	(+ve)	27	29
Not obedient	(-ve)	3	1

The results show that:

* The interpersonal behaviour between the hyperkinetic children and their peers and between themselves and adults, their parents and their teachers.

* With peers, the hyperkinetic child is characteristically immature, bossy and dominating. As a result he frequently has few friends.

* The hyperkinetic child is outgoing and extraverted, he seeks friends but loses them. Because of his unpopularity and need to dominate, he may choose to associate with more complaint associates, with younger children or if a boy with girls.

*Teachers, however have demonstrated, remarkable sensitivity for systematic observation of the suspected hyperactive child's behaviour. Parents appear to lack this sensitivity or perhaps the home environment substantially reduces the stress imposed on these children so that the degree of restless behavior is reduced.

* Firmness and consistency and uncontrolled punitive reactions of parents and teachers resulted in poor relation of child with both parents and teachers especially their fathers, because the father tolerance to the child's behaviour is less than mother. The hyperkinetic child's behaviours were not accepted by them.

* While child-mother relations and child relatives relations were not significant as all children are combined with their mothers but relative had no direct relation with children most of time.

* There is no statistical significant difference between hyperkinetic and normal children as regards to their parents obedience, which is contradictory to most studies said that most hyperkinetic children are disobedient .

Table (9): Scholastic achievement of hyperkinetic children in comparison to normal children (from teacher's point of view):

Degree	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good	2	13
Moderate	15	15
Below moderate	12	2
x^2= 9.32	d.F. = 1	P = 0.01

Table (9) shows that most of the hyperkinetic children were in the range of moderate and below moderate as compared with normal children, range of moderate and good with statistical significant difference of $P = 0.01$, i.e. the academic achievement is low for hyperkinetic children.

This aggress with what Keoph 1971, Douglas 1972 found out that overall academic achievement is usually low for hyperkinetic children, but some writers attribute this solely to low intellectual potential. But an appreciable fraction of children with hyperkinetic syndrome show abnormalities of perceptual performance on certain psychological tests and impaired learning in school even in the presence of a normal intellegence quotient (I.Q).

There are many causes to explain these learning problems:

. Neurological impairment causes both the behavioral syndrome and cognetive disabilities in hyperkinetic children.

. Overactivity interferes with attention and the acquisition of information.

SOCIAL STATUS

Table (10): Occupation of father.

Occupation of Father	Hyperkinetic Children (N=30)	Normal Children (N=30)
Self-employed	2	3
Junior management	4	4
Clerical	9	10
Skilled manual	5	3
Unskilled	10	7

P = N.S.

Table (11): Occupation of mother:

Occupation of Mother	Hyperkinetic Children (N=30)	Normal Children (N=30)
Without job	25	22
employee	5	8

$x^2 = 1.77$ d.F. = 1 P = N.S.

Table (12): Income

Income	Hyperkinetic Children (N=30)	Normal Children (N=30)
Good	10	11
Average	13	14
Below average	7	5

P = N.S.

Social status of parents of patients and controls was concerned as regards the occupations of parents and the income of the family.

The occupations of parents were divided into:

1. Self-employed.
2. Junior management
3. Clerical
4. Skilled manual
5. Unskilled.

Comparing parents occupations of patients with controls we found that no significant difference between the two groups. This can be due to the selection of the control children from the same school to be from the same social class.

This agrees with what Jaurice 1968 found out that "Since various causative factors may occur in all categories of the populations, the symptom picture may be found in all calsses.

CONDITION OF RESIDENCE

Table (13):

	Hyperkinetic Children (N=30)	Normal Children (N=30)
With parents	28	26
Foster Home	2	4

$x^2 = 0.74$ d.F. = 1 P=N.s.

Table (14): Number of rooms at home (in hyperkinetic and normal children.

Number of rooms	Hyperkinetic Children (N=30)	Normal Children (N=30)
1	7	3
2	6	8
3	9	12
4	5	4
More than 4	3	3

$x^2 = 0.28$ d.F. = 1 P = N.S.

Table (15) Sleeping arrangement

	Hyperkinetic Children (N=30)	Normal Children (N=30)
Alone	9	12
With parents or sibling	21	18

$x^2 = 0.56$ d.F.=1 P = N.S.

Tables (13, 14 & 15) show that htere is no significant difference between patients and controls as they are selected from the same social class.

Table (16) Family size

Family Size	Hyperkinetic Children (N=30)	Normal Children (N=30)
Less than 5	4	11
5 and more	25	19

$x^2 = 4.36$ d.F.) 1 P = 0.05

Table (16) shows that there is significant difference between patients and controls with P=0.05.

Table (17): Number of siblings of hyperkinetic and normal children.

Number	Hyperkinetic Children (N=30)	Normal Children (N=30)
3 and less	13	14
More than 3	16	13
Have no sibling	1	3

$x^2 = 0.28$ d.f. = 1 P = N.S.

The number of siblings in the family of patients as well as controls was investigated and results showed no significant difference between them.

Table (18) : Child's birth order

Child's Birth Order	Hyperkinetic Children (N=30)	Normal Children (N)30)
1 - 3rd	13	10
3rd	7	7
4th and above	9	10
Only one child	1	3

$x^2 = 2.09$ d.F. = 2 P = N.S.

Whether birth order has any effect on hyperkinetic syndrome and whether the first child or the last child is

more susceptible to this disorder was investigated and comparison between patients and controls was done and we found that no significant difference between them as regards distribution of birth order.

This is contradictory to the finding of Maurice 1968 who states that the first child is more susceptible.

This is also, contradictory to what Dr. Naiama Mekail, 1974 found out that the last child is more susceptible and she said that this is due to the big size of the Egyptian families as compared with other societies makes the last child the one at risk.

FAMILY STABILITY

Table (19): Number of children separated from one or both parents in experimental and control group.

	Hyperkinetic Children (N=30)	Normal Children (N=30)
Number of children separated from one or both parents.	14	12
Number of children not separated from their parents.	16	18

$x^2 = 0.27$ d.F. = 1 P = N.S.

Table (20): Parent from whom the child was separated.

From whom child was separated	Hyperkinetic Children (N=30)	Normal Children (N=30)
Father	4	5
Mother	5	4
Both parents	5	3

$x^2 = 0.57$ d.F. = 2 P =N.S.

Table (21): Types of separation of child

Type of Separation	Hyperkinetic Children (N=30)	Normal Children (N=30)
Temporary	10	10
Permanent	4	2

$x^2 = -0.51$ d.F. = 1 P = N.S.

The mean period in hyperkinetic group = 14 months

The mean period in normal group = 8 months

Table (22): Causes of separation

Causes of Separation	Hyperkinetic	Normal
Death of one of the parents	4	1
Divorce	4	2
Travelling of one of them	6	9

$x^2 = 2.93$ d.F. = 2 P = N.S.

The question that the aetiological factor of hyperkinetic syndrome may be environmental due to emotional disturbances in the family causing the so-called "reactive hyperkinesis" was also tested in our study and we found that no significant difference between family unstability in patients and controls.
This is contradictory to most studies which said that there is increasing incidence of family unstability between the hyperkinetic children as most of them came from broken families.

Table (23): Playing outside the home

	Hyperkinetic	Normal
Usually	27	23
Never	3	7

$x^2 = 1.92$ d.F. = 1 P = N.S

Table (24): Consaguinity

	Hyperkinetic	Normal
Yes	8	2
No	22	28

$x^2 = 4.32$ d.F. = 1 P = 0.05

Table (25): Degree of consaguinity

	Hyperkinetic	Normal
First degree	3	1
Second degree	4	-
Third degree	1	1

Table (25) shows that there is statistical significant difference between hyperkinetic and normal group.

This occasionally happened in our selected sample

BEHAVIOURAL PROBLEMS

Table (26): Sleep disorders among hyperkinetic in comparison to normal children.

Sleep Disorder	Hyper-kinetic	Normal
Insomnia	7	3
Recurrent awakening during sleep	8	2
Night mares	10	1
Night terror	4	-
Walking during sleep	1	-
Total	30	6

Table (27): Feeding problems among hyperkinetic in comparison to normal children.

Feeding Problem	Hyper-kinetic	Normal
G.I. Coli	1	1
Vomiting	-	-
eating anything	1	-
refusal of food	17	4
Overeating	-	2
Morethan 1 problem	1	-
Total	20	7

$x^2 = 11.38$ d.F. = 1 P=0.005

Table (28): Execretory function disorders among hyper-kinetic and normal children.

Excretory function Disorder	Hyper-kinetic	Normal
Nocturnal enuresis	1	2
Diurnal enuresis	-	-

P = N.S.

Table (29): Speech disorders

Speech Disorder	Hyper-kinetic	Normal
Delayed speech	1	-
Stuttering	3	1
Stammering	1	-
Slurring	-	2

$x^2 = 0.58$ d.F.=1 P=N.S.

Table (30): Psychomotor disorders:

Psychomotor Disorder	Hyper-kinetic	Normal
Nail biting	12	3
Thumb sucking	3	2
Tremors	-	1
Any type of movement	1	-
More than one	4	3

P = significant

. Neurotic symptoms during childhood in patients and controls such as sleep disturbances, phobias, psychomotor disorders, feeding problems, nocturnal enuresis and speech disorders were investigated and we found that:

- There is no significant difference between the two groups as regards excretory function disorder, speech disorders.
- There is statistical highly significant difference between the hyperkinetic and normal groups as regards sleep disorders, feeding problems and psychomotor disorders.

. This agrees with D.A. Ponds (1961) who found that neurotic symptoms are always present in both sexes in brain damaged children.

. The most obvious characteristic of the hyperkinetic children ~~children~~ is the difficulty which one has in controlling them as they sometimes seem to be driven by a constant source of energy and need little sleep (essential neurology, 1978).

ANTISOCIAL BEHAVIOUR

Table (31):

Antisocial Behaviour	Hyperkinetic	Normal
Stealing	1	2
Hiding	3	4
Lying	14	7
Curiosity	7	3
Trauancy	3	1

$x^2 = 10.76$ d.F.=1 P=0.005

Type of Offence:

$x^2 = 2.89$ d.F. = 4 P=N.S.

Table (32) shows that there is significant difference between hyperkinetic and control group as regards the incidence of antisocial behaviour. Difference in the type of offence was not significant between the two groups.

Antisocial behaviour occurs in up to one quarter and 10% to 15% have had actual police contact or court referral. More than half (½) had been involved in fighting, stealing and destructive behaviour and 2/3 were considered to be "incorrigible" by their parents. More than one third had threatened to kill their parents 7% carried weapons, 15% were fire setters and 15% were excessively drinking in the age of 16 (child psychiatry).

Antisocial behaviour is more frequent in older hyperkinetic children, it may develop as a secondary reaction.

Children who are unable to succeed in an academic setting, who are unable to develop satisfactory peer relationships, who find rejection at home and at school, are likely to become aggressive and rebel against the values of society.

MISCELLANEOUS DISORDERS

Table (32)

	Hyper-kinetic	Normal
Irritable	5	3
Destructive	4	2
Depressed	5	4
Angry	1	2
Attentive	6	5
Always crying at school	4	3
Dependent	1	7
Slovenly	4	4

$x^2 = 6.34$ d.F. = 7 P=N.S.

Weiss et al, 1971 said that the most significant symptoms are depression and low self-esteem which occur among the majority of hyperkinetic children. This has been viewed as a reaction to continuing failures and also a "depressive equivalent".

It is not surprising that children who endure academic failure, adult disapproval, peer rejection and loss of control are likely to acquire secondary emotional problems.

Table (34): Distribution of intelligence (I.Q) among hyperkinetic and normal children.

Range of I,.Q.	Hyper-kinetic	Normal
Below 90	6	1
Above 90	24	29

$x^2 = 4.04$ d.F. = 1 P = 0.05

Table (34) shows that hyperkinetic children have I.Q. which is below average intellegence and which is also lower than normal children with statistical significant difference P = 0.05.

This agrees with what Qunsted's (1955) and Pond (1961), and Klunkerfuss (1968) found out.

Electroencephalogram (E.E.G.) was done for 6 children with hyperkinetic behaviour disorder syndrome.

2 = normal E.E.G.

3.= focal spihe and slow wave complexes originating from right posterior temporal region with no history of clinical seizures = subclinical form of epilepsy.

1 = has a clinical form of epilepsy (has a history of clinical tremors).

Abnormality of records in hyperkinetic children

has been attributed to many causative factors.

. Genetic inheritance (Deis Hill, 1944 & Margaret A. Kenmard, 1949; Hilok, 1961).

. It may be due to birth injury, head trauma, encephalitis.

. Psychosomatic influences which give rise to autonomic or endocrine changes which in turn causes changes in the biochemical milieu of the brain and is reflected both in E.E.G. & abnormal patterns of behaviour.

. Okasha A. (1961) found out that the hyperkinetic syndrome arises in association with cerebral damage or epilepsy in about ½ of the cases.

. As interest in behaviour problems grew with increasing orientation of pediatricians to child development and psychologic disorders, it became apparent that most children with hyperkinetic behaviour did not exhibit historic or clinical evidence of prior brain damage (practice of pediatric neurology).

Studies have reported 35 - 50% of hyperkinetic children have abnormal E.E.Gs. with an increase in slow wave activity. However, there are no E.E.G. abnormalities specific to the syndrome.

Physical Examination

Physical examination was done for both patients and controls for assessment of weight, height, vision, hearing, physical abnormalities or any physical illness that may affect the child's behaviour ; comparison was done between the two groups to find any difference between them.

By statistical analysis using x^2 test we found no significant difference between the two groups.

This agrees with de Hirsch (1973), who said that physical examination is usually normal in hyperkinetic children but may be a defect of vision or hearing or abnormalities of speech.

Also, it is contradictory to Waldrop et al., (1970) who has found during her work on hyperactivity and minor physical anomalities in Elementary School Children.

One group of investigators (Waldrop & Halverson, 1971) has reported a high incidence of minor physical anomalies such as: widely spaced eyes, curved fifth finger, adherent earlobes especially in boys.

Rapport et al., 1974, not only confirmed the presence of these anomalies of minor physical anomalies but showed that the presence of these anomalies was

associated with:

. Severity of hyperactivity.

. A history of hyperactivity in the father.

. A history of early obstetrical difficulty in the mother.

. Higher than normal "mean plasma dopamine-B-hydroxylase activity.

Hyperkinetic children with minor physical anomalies may form a distinct subgroup.

Neurological Examination

It was done to patients and controls and we found that:

. Epilepsy was present in one case of hyperkinetic children.

. There is no minor neurological signs as:

- squint
- fine tremors
- speech disarticulation
- speech retardation.

This agrees with what Werry, 1972 found out that, " While some hyperkinetic children may suffer from frank brain damage, it is clear that the majority don't.

Also, Rutter, 1968 said "many hyperkinetic children don't demonstrate any neurological signs."

CHAPTER IV

RECOMMENDATIONS

1. The child with hyperkinetic syndrome is best considered as a multihandicapped child requiring a multiple modality treatment approach.

2. Treatment must be individualised and based on a comprehensive assessment of each child and his family

3. These children should be trained to develop motor skills and encouraged to become increasingly involved in athletic activities which offer an opportunity for self-discipline and good direction in the expression of their intense motor drives.

4. The retarded hyperkinetic child is more sensitive to family tension than any other child and guidance to parents as well as special class educational methods according to their intellectual level should be provided for them.

5. Child behaviour can be modified by arranging environmental rewards and punishment to encourage desirable behaviours in the child but without excessive discussion or lecturing to the child.

6. Counseling services to the families of hyperkinetic children.

7. Parents need to understand that the hyperkinetic behaviour stems from a neurophysiologic control mechanism which is defective and not hostile or negativistic reaction.

8. Parents have been helped to deal more affectively with their hyperactive children through behaviourally oriented programs. This is specially useful in assisting

parents to set limits and in facilitating more positive family interaction.

9. Hyperkinetic children require more structure in their daily activities than other children.

10. Too many variations in the daily routine may be disadvantageous to the child.

11. Avoiding overstimulation, excessive fatigue and situations known to cause difficulty.

12. Firmness and consistency should be stressed but uncontrolled punitive reactions of parents should be avoided.

13. The use of brothers and sisters to modify behaviour of their hyperkinetic siblings.

14. It is important that there should be consistency of expectations methods of behavioral reinforcement between the home and the school.

15. Each teacher must give reinforcers in the classroom to hyperkinetic children and send a note each day to their parents.

16. Guidance to teaching personnel that instructions should not be promptly enforced and that child should be free to go out from class to playground when motor tension mounts beyond control.

17. A skilled tutor may do a great deal to increase a child's motivation to learn.

18. Parents should be strongly urged to avoid playing the tutorial role since it often conflicts with the parental role and results in deterioration of the parent-child relationship.

19. There has been a great efflorescence of special private schools for children with learning problems and may be essential to a child who is on the verge of total failure in public school system and for severely hyperkinetic children when other treatment methods have been unsuccessful.

20. Most hyperkinetic children can tolerate, and will need to remain in, a regular classroom.

21. Simple classroom measures such as: placing the child close to the teacher and away from distractions and giving one-to-one attention through the use of teacher's aids may be helpful.

22. Drug therapy is of benefit for 75% of hyperkinetic children.

23. Psychotherapy using active techniques such as these developed by Gardner (1973) is indicated for the secondary emotional symptoms of depression, low self-esteem and poor peer relationship.

24. Whatever treatment modality is utilized, the physician must closely follow the child's progress, As treatment and progress need to be assessed at periodic intervals to meet the changing needs of the developing child. This applies not only for drug management but for all elements of the treatment program.

CHAPTER VI

REFERENCES

Arthur, L. Benton: Ph.D., D.SC.:"Psychological Testing of children" Quoted from "Child Psychiatry": Assessment. P:2473.

Aston ,J.P. and Dobson, Gillian (1972): Family interaction and social adjustment in a sample of normal school children" . J. Child Psychol. Psychiat. Vol. 13, No. 2, June, (1972).

Chazan Maurice, Jackson S., (1971): "Behavior problems in the school". J. Child Psychol. Psychiat.,Vol. 12, 191 - 210.

Connors C.K.: "A teacher rating scale for use in drug studies with children". AM. J. Psychiatry, 126 884 - 888, 1969.

Cooper, S,F., Leach C., Storer D. and Tonge W.L. "Birth. J., Psychiat. 1977, 131, 514.

Denhoff, E., Laufer M.W., Holden R., (1959): "The syndrome of cerebral dysfunction". J. Okla Med. Ass. 52 : 360 - (1959).

Denis Williams (1967): "Behaviour disorders in brain damaged children studies of neurological basis of intellectual function." , Modern trends 4, (1961).

Diagnostic and Statistical Manual of Mental Disorders (DSM - 111). Washington, DC, American Psychiatric Association, to be published.

DOUGLAS, J.W.(1972): "Treatment of hyperkinetic disorders with Methylphenidate". Brith. Med. J.

Drawings Yonkers - Hundson: Goodenough F.L. (1949): "Measurement of intelligence". New York World Book Company.

Drethoman, W.H. (1971): " The effects of brain damage"; Basic child psychiatry.

Drethoman, W.H., (1971): Treatment. Basic child psychiatry.

Eisenberg, L: The overactive child. Hosp. Practice, 8:151-16o, (1973).

Eisenberg, L: The clinical use of stimulant drugs in children. Pediatrics 49: 654, (1972).

Eliot Slater and Martin Roth: Clinical Psychiatry.

Feingold B.F.: Why your child is hyperactive. New York, Random House Inc. (1975).

Gordon J. Millicap et al., (1967): Studies in hyperkinetic behaviour, laboratory, clinical evaluation of drug treatment." Official J. of Amer. Academy of Neurology, May , 1967.

Hallgrim Klove and Kjell Hole:"The hyperkinetic syndrome Quoted from: Hyperactivity in children., Edited by Ronald L.T. rites, University Park Press, Baltimore Trites.

Helmy, N.: Behavioral and Emotional disorders in children, Thesis for partial fulfillment of M.Sc. in Psychiatry, Ain Shams University, 1982.

James, R. Morrison, M.D. and Mark A. Stewart, M.D.: "Evidence for polygenetic inheritance in the hyperactivechild syndrome". Am. J. Psychiatry 130 : 7, July 1973.

James Varga, M.D.: "The hyperactive child." Am. J. Dis. Child, Vol. 133, April, 1979.

Kahn E., Cohen L: Organic driveness : A brain syndrome and an experience. N. Engl. J. Med. 210 :748-756, 1934.

Keogh B.: Hyperactivity and learning disorders: Review and speculation. Except child 38:101-109, 1971

Kinsbourne, M., Caplan PJ: "Children(s learning and attention problems". Boston, Little Brown & Co., 1979.

Kinsbourne M.: "Minimal brain dysfunction as a neurodevelopmental lag". Ann Ny Acad. Sci., 205 : 270. 1975.

Klunberfuss, G.H. et al. (1968): "E.E.G. abnormalities of child with hyperkinetic behaviour". Archives of neurology, Feb., 1968.

Kohn and Cohen (1968): "Hyperkinetic syndrome". Archives of neurology, Vol. 18, No. 2, Feb. 1968.

Kolvin I, Ounsted, C., 1971: "Cerebral dysfunction and childhood psychosis". Brit. J. Psychiat., 118, 407 - 414.

Laufer M.W., Denhoff, E.: "Hyperkinetic behaviour syndrome in children". J. Pediatr. 50 : 463 - 474,1957.

Levine M.D., Brooks, R., Shonkoff, J.: "A pediatric approach to learning disorders". New York, Johm Wiley & Sons Inc., 1980.

Low, H.(1973): "A note of follow up study of childhood neurosis and behaviour disorders". J. Child Psychol. Psychiat. 14, 147 - 150.

Maccoby E.E., Dowley E.M., Hagen J.W., et al.:"Activity level and intellectual functioning in normal preschool children". Child Dev. 36:761-770,1965.

Mellsoop, Graham W., (1972): "Psychiatric patients seen as children and adults. Childhood predictors of adult illness. J. Child Psychol. Psychiat., 13, 91 - 101.

Melvin D. Levine, M.D., Frank Oberkloid, MBBS, FRACP,DCH.: "Hyperactivity". Am. J. Dis. Child - Vol 134, April, 1980.

Mendelson, W., Johnson, N.; Stewart MA: "Hyperactive children as teenagers": A follow up study. J. Nerv. Ment. Dis. 153 : 273 - 279, (1971).

Moskowitzm, M.A., Wurtman R.J.: Catecholamines and neurologic diseases. N. Engl. J. Med. 293 : 274 - 180, 332 - 336, 1975.

Naima Mekail (1974): "Assessment of hyperkinetic children 6-12 years, neurological, psychiatric and laboratory investigations and drug therapy. THESIS, Ain Shams University.

Naomi Richman: "Behaviour problems in preschool children: Family and social factors". Brit. J. Psychiat. 1977, 131, 523-7.

Okasha A. (1967): "Essentials of Psychiatry". The ARHB writer printing and Publishing House, Cairo.

O'Malley J.E., Eisenberg, L.:"The hyperkinetic syndrome." Semin Psychiatry 5 : 95 - 103, 1973.

Paul, H. Wender: "Diagnosis and management of minimal brain dysfunction". Quoted from: Manual of psy Psychiatric therapeutics edited by Richard I. Shader M.D., page 163 - 169.

Peters, J.E., Romine J.S., Dykman R.A.: A special neurological examination of children with learning disabilities. Dev. Med. Child Neurol. 17:63-78,1975.

Pond, D.A., (1972): The btain damaged child." in Howell G.T. (ed) Modern Prespectives in child Psychiatry, London.

Pond, D.A. (1961): "Psychiatric aspects of epilepsy and brain damaged children". Brite Medical Journal, Nov. 251.

RAPPORTJ.L., Quinn, P.O., Bradbard, G. et al.: "Impramine and methylphenidate treatments of hyperkinetic boys." Arch Gen Psychiatry 30 : 789 - 793, (1974).

Richard, J. Schain: "Hyperkinetic syndromes in children". Quoted from: The practice of pediatric neurology by Swaiman and Wright. p 888.

Robert, A. Hoekdlman, Sawl Blatman . Philip A., Brunnell, Stanford B. Friedman, Henry M., Seidel.: "Hyperactivity". Quoted from : Principles of Pediatrics, Heralth Care of the Young. Page 550.

Robert C. Schnackenberg, M.D.: "Caffeine as a substitute for Schedule II stimulants in hyperkinetic children". Am. J. Psychiatry 130 : 7, July,1973.

Robin Benians: Post graduate doctpt, the International Journal of prevention, diagnosis and treatment London, 210, May, 1982.

Robin Benians: Post-graduate doctor, Middle East. May, 1982 : 204 - 210.
"Behavior disorders in children associated with epilepsy."

Rutter, M., Resp., MDF., FRCP, Sych. D.P.M., and Lionel Herson, M.D. FRCP, Sych., DPM.,(1972): "Child Psychiatry". Modern approaches. The hyperkinetic syndrome.

Rutter, M. (1967): A children's behaviour questionnaire for completion by teachers: Preliminary finding. J. Child psychiatry, 8 : 1-11, 1967.

Seymour Furman, M.D., and Anne Feighner, M.S.W.: "Video-Feedback in treating hyperkinetic children: A preliminary report. Am. J. Psychiatry, 130:7, July, 1973.

Sykes, Donald Hl, Douglas. V.I.(1971): "Attention in hyperkinetic children effects of methylphenidate". J. Child psychol. psychiat. 12, 129 - 139.

Waldrop, M., Bethesda W., (1970): "Hyperactivity and minor physical anomalies in elementary school children." Sandoz Psychiatric SPECTATOR. Vol. III, No. 6, 47th. Annual meeting, The Amer. Arthpsychiatric Ass. , March, 1970.

Weiss, G., Hechtman, L,, Perlman, T. et al.: "Hyperactivities as young adults: A ,controlled prospective ten-year follow up of 75 children. ARCH. Gen. Psychiatr. 36 : 657 - 681,1979.

WEISS G., and Mindek and C. Jancy J. (1972): "Cognitive styles in adolescents previously diagnosed as hyperactive". J. Child psychol. psychiat., Vol. 13, 1972, pp. 203 - 209.

Weiss G, Minde K., Werry J.S., et al.: "Studies on the hyperactive child: VIII. Five-year follow-up. Arch. Gen Psychiatry 24: 409 - 414, 1971.

Whalen C.K., Hencher B: Psychostimulants and children. A review and analysis. Psychol. Bull 83:1113-1130,,1976.

William Pryse-Phillips M.D., J.Y. Murray M.D.,1978: "Essential neurology". pp 407 - 408.

- little response (N.R.).
- resistent (antisocial).
- treat doctor as an object (autistic).

3- Smiling response :-
absent in neurotics and antisocial children.

C) Non-Verbal expression of affect :-

1. anxiety :- elevated eye brows, dilated pupils.
2. depression :- crying with no tears, eyes narrowed, angle of mouth is downward.
3. apathy :- lack of mobility and social contact, face is devoid of emotions.
4. Anger :- baring teeth, clenching fits, stamping, destruction).

D) Verbal behaviour :-

1- failure of speech development.
2- Speech in a non-symbolic way i.e loss of ~~generali~~ generalization (autism).
3. quantity of spontaneous remarks :- a- decreased.
b- increased.
4- Content :- a- pre-occupations.
b- fears.

Appendix C — Psychiatric examination of children

- Complaint :- relation to any particular event.
  - Course, severity, extent of suffering.

- Parents :- emotional attitude towards the child
  - Personality
  - specific features (violence & punitive, tenacity, inconsistent attitude, drinking, criminal behaviour

- Preliminary observations :-
  - Physical abnormalities & body built.
  - dress (appropriateness to sex and age).
  - reaction to separation.
  - behaviours (mentally retarded → sitting, self-ing
    (autistic → no social response).
    (antisocial → aggressive to subjects or dig

- Psychiatric examination :-

(A) non-Verbal behavior (motor) :-

1. quantity :- a. hyperactive (impulsive, short attention).
   b. hypoactive (no interest).
2. quality :-
   a. incoordination (situational or persistent).
   b. stereotypes and fidgetting.

(B) Relation with interviewer :-

1. eye :- avoidance (autistic) or fixed direction (depressed, apathy).
2. general social response :-
   - passive (depressed or apathetic).

Observation	Degree of Activity			
	Not at All	Just a Little	Pretty Much	Very Much
1. Restless or overactive				
2. Excitable, impulsive				
3. Disturbs other children				
4. Fails to finish things he starts, short attention span				
5. Constantly fidgeting				
6. Inattentive, easily distracted				
7. Demands must be met immediately—easily frustrated				
8. Cries often and easily				
9. Mood changes quickly and drastically				
10. Temper outbursts, explosive and unpredictable behavior				

بطاقة الصحة النفسية للاطفال

- اسم الطفل ثلاثيا :
- الجنس : (ذكر / انثى)
- السنة الدراسية :
- العنوان :
- تاريخ الميلاد : محل الميلاد :

أولا – معلومات خاصة بنمو الطفل وعلاقاته :

أ – فترة الحمل والرضاعة :

١ – هل كان هناك ضاعفات او اصابات أثناء الحمل ؟ ( ) نعم ( ) لا

واذا وجد : ما هى ؟؟

٢ – هل كانت الولادة طبيعية ؟؟

٣ – ما حالة الطفل عند الولادة ؟؟

٤ – ما هو السن الذى تم فطام الطفل فيه ؟؟

هل تقبل الامور بسهولة ؟؟

ب – هل كان نمو الطفل طبيعى : المشى ، الكلام ، الاكل ،..... ؟

( ) نعم ( ) لا ، اذا كان هناك صعوبات ما نوعها ؟

جـ – التاريخ المرضى للطفل : ما هى الامراض التى اصيب بها الطفل ؟

( ) التهاب لوز متكرر ( ) حصبة ( ) تشنجات ( ) صرع ( ) امراض اخرى اذكرها

د – علاقات الطفل الاجتماعية وتحصيله الدراسى : ضع علامة ( ) عن ما تراه صحيحا بالنسبة للطفل :

١ – الانطواء والانبساط : ( ) يسعى الى الاخرين ( ) يبتعد عنهم

( ) منطوى جدا ولا يتعامل مع احد

٢ – علاقته بوالدته : ( ) يسعى اليها ولا يريد ان يتركها ( ) يجب الجلوس معها

( ) علاقة فاترة ( ) ينفر منها

٣ — علاقته بوالده : ( ) يسعى اليه ولا يريد ان يتركه ( ) يحب الجلوس معه

( ) علاقة فاترة ( ) ينفر منه .

٤ — علاقته باقاربه : ( ) يسعى اليهم ويحبهم ( ) علاقة فاترة ( ) ينفر منهم

٥ — علاقته بالمدرسين : ( ) يسعى اليهم ويحبهم ( ) علاقة فاترة

( ) ينفر ويخاف منهم .

٦ — علاقته بزملائه الاطفال : ( ) يسعى اليهم ويحبهم ( ) علاقة فاترة

( ) يحب البعض وينفر من البعض ( ) ينفر منهم تماما

٧ — تحصيله الدراسى : ( ) جيد جدا ( ) متوسط ( ) ضعيف

درجات آخر العام :

٨ — الطاعة : ( ) مطيع ( ) مطيع احيانا ( ) غير مطيع

( ) عنيد جدا ولا يستجيب مطلقا .

٩ — ما أنواع الالعاب التى يحبها ويقضى فيها وقتا طويلا ؟

ثانيا — معلومات خاصة بالاسرة :

أ — التاريخ المرضى للاسرة :

ما هى الامراض التى أصيب بها احد افراد الاسرة او احد اقارب الطفل ؟

ب — الحالة المنزلية والاجتماعية :

١ — اسم الوالد (او ولى الامر) :

٢ — مهنة الوالد (او ولى الامر) :

٣ — مهنة الوالدة :

٤ — مستوى الدخل : ( ) يكفى نفقات المعيشة ( ) يكاد يكفى بصعوبة

( ) لا يكفى .

٥ ـ اين يمكث الطفل اثناء تغيب الام ؟

من يعتنى به فى هذه الاثناء ؟

٦ ـ هل يعيش الطفل فى منزل الاسرة ؟ ( ) نعم ( ) لا

٧ ـ مع من يعيش الطفل فى معظم الايام بالتفصيل ؟

٨ ـ عدد غرف المنزل الذى يعيش فيه الطفل :

هل له سرير بمفرده ( ) نعم ( ) لا

من ينام معه فى نفس الغرفة ؟

٩ ـ عدد افراد الاسرة الذين يعيشون فى نفس المسكن ؟

١٠ ـ عدد اخوة الطفل :

ترتيب الطفل فى اخوته :

بيانات الاخوة بالتدريب من الاكبر الى الاصغر :

١١ ـ هل انفصل الطفل عن احدى والديه او كليهما ؟ ( ) نعم ( ) لا

• عن من انفصل : ( ) الاب ( ) الام ( ) كليهما

• هل كان الانفصال : ( ) مؤقت ( ) دائم

• ان كان مؤقتا : كم استغرق من الزمن ؟

• سبب الانفصال بالتفصيل : ( ) مرض ( ) سفر ( ) انفصال

( ) وفاة • اسباب اخرى :

• ما سن الطفل عن حدوث الانفصال ؟

• ما مدة هذا التأثر ؟

• هل تأقلم الطفل مع الوضع الجديد ؟

١٢ ـ هل ينزل الطفل الى الشارع للعب ؟ ( ) باستمرار ( ) احيانا ( ) لا ينزل

١٣ ـ هل توجد قرابة بين الاب والام ؟ ( ) نعم ( ) لا

مانوع هذه القرابة ؟ ( ) اولاد عم اوعمه ( ) اولاد خالات اوخال ( ) من نفس العائلة

ثالثا — الاضطرابات السلوكية او الانفعالية التى يعانى منها الطفل :

ضع علامة (✓) عن يمين الامور الواضحة جدا والمتكررة فى حياة الطفل مع مراعاة الدقة الشديدة :

أ — صعوبات النوم :

( ) الارق (التأخر فى الاستغراق فى النوم)

( ) القلق (يستيقظ كثيرا أثناء النوم)

( ) الكابوس (حلم مزعج يوقظ الطفل ويمكن تهدئته) ( ) المشى أثناء النوم

( ) فزة الليل (يقوم الطفل مفزوعا أثناء النوم دون أن يشعر بمن حوله ، ولا يمكن تهدئته (لينسى ذلك) .

ب — صعوبات التغذية :

( ) مغص شديد مستمر ( ) قئ باستمرار ( ) أكل اى شئ (مثل الجير وخلافه)

( ) رفض الطعام (فقدان الشهية) ( ) دائما ( ) احيانا

( ) الشراهة (التهام الطعام بسرعة وبكميات كبيرة)

جـ — اضطراب وظائف الاخراج :

( ) عدم التحكم فى البول نهارا ( ) عدم التحكم فى البول ليلا .

( ) امساك مستمر

( ) اى اضطرابات اخرى او شكاوى طبية مثل الصداع المستمر ، ارتفاع الحرارة ، آلام ...

د — صعوبات النطق والكلام :

( ) تأخر النطق ( ) الصمت التام ( ) تهتهة ( ) اللثغة

( ) صعوبات اخرى . ما هى ؟

هـ ـ اضطرابات الحركـــــة :

( ) الحركة الزائدة وعدم الاستقـــرار .

( ) وعشـة ( ) قضـم الاظافر ( ) مص الاصابع

( ) اى حركات غير طبيعية ؟؟ ما نوعها ؟؟

و ـ اضطرابات السلوك الاجتماعى :

( ) اخفاء الاشياء او القاؤهـا من النافذة ؟

( ) الكذب باستمرار ( ) الغيرة باستمرار

( ) سهل الاستثارة والهياج ( ) مشاجرات مستمرة (يعتدى على غيرها باستمرار)

( ) تخريب واتلاف كل ما يقع تحت يديه ( ) دائما حزين او مهموم او يبكى كثيرا

( ) غضب شديد (الارتماء على الارض وضرب الارض بيديه ورجليـه)

( ) الانطواء والبعد الدائـم عن الاخرين

( ) السعى باستمرار الى جذب انتباه الاخرين واهتمامهـم به .

( ) الخوف المستمر من : ( ) المدرسة ( ) الظلام ( ) الحيوانات

( ) اى موقف آخـــر .

( ) البكاء باستمرار فى المدرسـة .

( ) سرعة الشرود وعدم التركيز فى اى عمل او لعبة لمدة معقولة (مـا دقائق)

( ) عدم الاعتماد على نفسه فى اى شئ

( ) اهمال النظافـة وعدم الحرص عليها (دائما يلوث ثيابـه) .

( ) اى ملاحظـات اخرى على تصرفات الطفل (او اية مشاكل يسببها) ...

النشاط الحركي الزائد في الاطفال

المقدمة :

يقوم البحث على اساس انه توجد فئة كبيرة من الاطفال غير المستقرين حركيا ويختلفون في عدة نواحي عن الاطفال الاسوياء ، وهذه الظاهرة تكون اكثر شيوعا بين البنين وتتضح بنموذج من الاعراض مثل : الحركة الزائدة ، تشتت الفكر والاثارة ، السلوك العدواني والسلوك ضد المجتمع ، ويعاني هؤلاء الاطفال من بعض مشاكل التعليم وبعض الانفعالات مثل الاكتئاب وقلة احترام الذات .

هدف البحث :

هذه الدراسة هي محاولة لتوضيح السلوك الغير عادي في مجموعة من الاطفال يعانون من النشاط الحركي الزائد ومحاولة الوصول الى العوامل المسببة لهذه الحالات سواء كانت وراثية او بيئية مكتسبة او اجتماعية .

الخطوات التي اتبعت في البحث هي :

لهذا قمنا باختيار عينة من الاطفال من مدرسة نبيل الوقاد الابتدائية بحصر الجديدة ومكونة من ٣٠ طفلا وطفلة يتراوح سنهم ما بين ٦ ــ ١٢ سنة كلهم يعانون من النشاط الحركي الزائد . وقد تم اختيار الاطفال بعد تطبيق و وعينة اخرى ضابطة تتكون من ٣٠ حالة اطفال اسوياء من نفس المدرسة (مدرسة نبيل الوقاد الابتدائية) ومن نفس السن والمركز الاجتماعي وتتراوح اعمار الاطفال ايضا من ٦ ــ ١٢ سنة .

وقد تم تطبيق الاتي على كل طفل من المجموعتين :

- عمل مقابلة شخصية مع كل طفل مع احد او كلتا والديه كلما امكن ذلك .
- فحص طبي كامل لكل طفل وفحص عصبي .

- فحص نفسي
- تطبيق استجواب للوالدين
- تطبيق استجواب للمدرس
- تطبيق اختبار الذكاء (رسم الرجل)
- عمل رسم للمخ لست حالات من الاطفال يعانون من النشاط الحركى الزائد .

النتائج والمناقشة :

أثبت البحث ان الاطفال غير المستقرين حركيا يختلفون عن الاطفال الاسوياء من ناحية :

- زيادة نسبة الامراض العضوية بين الاطفال الذين يعانون من النشاط الحركى الزائد .
- ضعف العلاقة بين الطفل ذى النشاط الحركى الزائد ووالده بينما تكون العلاقة عادية بين الطفل السوى ووالده .
- اضطراب العلاقة بين الطفل ذو النشاط الحركى الزائد ومدرسه .
- التحصيل الدراسى لهؤلاء الاطفال اقل عند مقارنته بالتحصيل الدراسى للاطفال الاسوياء .
- زيادة حجم الاسرة فى الاطفال ذو النشاط الحركى الزائد عنه فى الاطفال الاسوياء .
- وجود قرابة بين الاب والام اكثر فى الاطفال ذو النشاط الحركى الزائد .
- زيادة نسبة اضطرابات النوم فى الاطفال ذو النشاط الحركى الزائد فى صورة ارق ، تكرار استيقاظ اثناء النوم ، فزه الليل ، الكابوس .

- زيادة نسبة اضطرابات التغذية في الاطفال ذو النشاط الحركي الزائد عنه في الاطفال الاسوياء وذلك في صورة مغص ، رفض الطعام (فقدان الشهية) القيء .
- اضطرابات الحركة اكثر انتشارا في الاطفال ذو النشاط الحركي الزائد عن المجموعة الضابطة . وهذه كانت في صورة قضم الاظافر ، مص الاصابع ، وعشة ، اي حركات غير طبيعية اخرى .
- اضطرابات السلوك الاجتماعي اكثر في الاطفال ذو النشاط الحركي الزائد عنه في الاطفال الاسوياء .
- كذلك اظهر رسم المخ نسبة من الموجات الغير طبيعية .

ويرجع السبب في حالتهم الى عوامل كثيرة سواء كانت قبل ميلادهم أو أثناء الولادة او في سنوات الطفولة الاولى وقد تكون عوامل وراثية او بيئية مكتسبة او عوامل اجتماعية .

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جامعة عين شمس
معهد الدراسات العليا للطفولة

النشاط الحركي الزائد في الاطفال

رسالة مقدمة

كجزء متمم للحصول على درجة ماجستير الدراسات العليا للطفولة

قسم الدراسات الطبية والطب نفسية

اعداد

ابتهال ابراهيم اسماعيل محمد

اشراف

الدكتور / عادل محمود دمرداش

استاذ مساعد الامراض النفسية والعصبية

كلية طب البنات الاسلامية جامعة الازهر

١٩٨٣