Attention Deficit and Hyperactivity Disorder (ADHD): Defining the role of the school in the assessment and management of children with ADHD and the effect that children with this disorder can have on the family

By

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1. INTRODUCTION

1.1 Background

Attention Deficit and Hyperactivity Disorder (ADHD) is one of the most common disorders of childhood. It is a neurobehavioural disorder that effects 2-3% of the population. It has gained a wider acceptance and awareness amongst the medical and general communities alike in the last decade. This could, in part, be due to the increased coverage of the disorder within all forms of the media. Some would argue that this exposure has been to a point, which has made ADHD the behavioural "flavour of the month".

With the increased awareness and acceptance, the incidence in Australia has also appeared to increase. This apparent epidemic of ADHD that we are currently witnessing is more likely a result of the under recognition in the past of a behavioural syndrome with a strongly biological basis. While the increased awareness of this condition has lead to a diagnosis of ADHD in children who have in the past been labeled merely as "naughty", the label of ADHD is sometimes used indiscriminately to explain the difficult behaviour exhibited by some children.

An important repercussion of the increased exposure of ADHD is that major advances have been made in all areas of the disorder. The clinical picture has been refined and the developmental manifestations have been delineated. Patterns of co-morbidity have been documented and although the cause of ADHD still eludes the medical profession, various aetiological factors have been investigated.

Despite the increased acceptance and media coverage, ignorance about ADHD is still widespread. There are still those within the medical profession and general community who are not entirely convinced that ADHD exists. Dr Simon Clarke, consultant paediatrician at the New Children's Hospital, Westmead, NSW, admits that the anti-ADD view is still common among many doctors. "But ADD is a real condition" he says. "It exists in 2-3% of children, and not treating it is very dangerous because it exposes these kids to further failure, and their families to serious

problems." [1] It is essential that attitudes towards children with this "hidden disorder" change if a child with ADHD and ultimately the community as a whole are to benefit.

The school system has also been slow to accept ADHD as a 'real' condition that requires attention within the school setting. Treatment of ADHD in schools has received comparatively little attention, even though children spend more time in school than in most other structured environments

It is in the school environment that children have their most consistent, extensive contact with a variety of trained professionals. Schools have the potential to play a strategic and beneficial role in the treatment of ADHD children. For this reason, it is important that the involvement of the school in the management of ADHD children is encouraged and supported at both a federal and state government levels. However, in Australia at present, there have not been adequate measures undertaken to enable the educational system to accommodate the needs of children with ADHD.

Another of the wide reaching effects that ADHD can have on the community that is too often forgotten, is the effect on the immediate family of an ADHD child. The "inside" experiences of ADHD have not yet been fully researched. Issues such as the effect of an ADHD on the marital relationships, the social life of the family and the siblings have hardly been touched on.

The parents of these children are subject to often, daily abuse, both emotional and physical, from their own children. Not to mention the constant negative comments that ignorant outsiders make about their parenting abilities. The siblings of ADHD children suffer too. Their needs are often neglected as their parents struggle to maintain manageable behaviour from their ADHD child.

[1] White,J., "ADD-Epidemic or Invention," *Living Well*, Oct 1998 pg. 10-13.

1.2 Aims

The purpose of this advanced research study was to examine the important role that the school can and should play in the management of children with ADHD. It also examined the effect that children with this disorder can and do have on the immediate family.

Both these aspects of the disorder addressed in this research paper are important as it is within the home and school settings in which the greatest impact can be made on the lives of children with ADHD and their families. The impact on society of ADHD can be enormous in terms of financial cost, stress to families, disruption to schools, and its potential for leading to criminality and substance abuse. Early detection and of the disorder and the implementation of management strategies within these settings is very important.

1.3Limitations of the Study

One of the major limitations of this study was the relatively small number of participants who completed the parent questionnaire. As this was an important focus for discussion in the study it was important that as much information as possible could be gathered.

Originally, one hundred copies of the questionnaire were made. Approximately eighty of these were distributed via the means outlined in the methods chapter. Only twenty of those distributed were completed and returned to the investigator before the completion date of this study.

It must be noted that of the eighty questionnaires distributed, at least twenty did not go directly to the prospective participants themselves, but to social workers or family support workers to distribute. Thus a number of these may not have reached any potential participants.

Another issue that may be considered as a limitation of this study was the fact that the participants in the study were drawn from within and around the Hobart area alone. It was the investigator's belief however, that this area of Tasmania would be fairly representative of the rest of the state and most likely the nation.

This belief was supported by the similarity between the figures that emerged from the survey and national figures. For example, national statistics estimate that around half of the children diagnosed with ADHD also have co-existing learning difficulties. The results from the questionnaire found that 50% of children with ADHD also had a learning difficulty of some description.

All of the participants who answered the questionnaire were female. In fact mothers of ADHD children answered all the questionnaires. A number of questionnaires were distributed to fathers of ADHD children but none of these questionnaires were returned.

This was a disappointing yet expected outcome of the questionnaire, considering most of the questionnaires were distributed at support groups which were held during working hours. It would have been interesting to compare the two genders answers on how they believe the disorder had effected their family and them personally, for they would have undoubtedly have been somewhat different.

One of the aims of this study was to determine the role that the school plays in the assessment and management of children with ADHD. While this was taken from the parent's perspective for the purposes of this study, this produced a rather biased point of view of the school's role. This bias was rectified to a certain degree by the research presented in the study on the subject and by correspondence with professionals from the education department.

This study may leave further scope for a project with similar aims of determining the schools role in the management of children with behavioural difficulties from the

perspective of the average classroom teacher, the school and the education department.

Despite of its limitations, this study does indicate the need for further considerations to be made regarding the education of children with ADHD and the wide reaching social impacts of such a disorder, particularly on the family unit.

1.4 Chapter Summary

Chapter two of this document is a review of the literature that has been produced on ADHD within the last ten years. It summarises the knowledge about ADHD in the areas of history, epidemiology, aetiology, diagnosis, management and outcomes. Chapter three outlines the methods by which this research project has been conducted.

Chapter four is a discussion of the school's role in the management of children with ADHD. It examines the potentially beneficial impact that appropriate school management can produce in ADHD children of a school age and if early intervention is applied, pre-school children affected by ADHD. It also highlights some educational policy issues that need to be addressed.

Chapter five addresses the potential and real effects that a child with ADHD can have on the family unit. It also discusses the important issue of respite care for the parents and carers of children with ADHD. At present respite is a difficult yet essential resource for these parents to access.

Chapter six is a presentation of the results of the questionnaire and interviews conducted. Chapter seven is a discussion of the results obtained from both the interviews and questionnaires performed. It also analyses how these results relate to the literature that was reviewed. In conclusion it addresses the future advances and changes in attitude that need to be made to increase awareness and understanding of a disorder with potentially wide ranging effects.

2. LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature produced on ADHD to date. It focuses on many aspects of the disorder. The history, epidemiology, aetiology, symptomology, diagnosis and assessment, treatment and outcomes of ADHD are all addressed. This overview of the disorder empahsises the fact that ADHD is a 'real' disorder with wide reaching and long-term social implications. It highlights the need for its early recognition and management within both the home and school settings so that the negative outcomes of this common disorder can be avoided.

2.2 What is ADHD?

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most common neurobehavioral disorders encountered within the paediatric setting today. "Some authors suggest that at least 50% of referrals to children clinics are ADHD related." [2] It can be described as a cluster of behaviours, the characteristics of which merge with normal behaviour. The three core behaviours being; inattentiveness, impulsiveness, and overactivity.

In addition, there are a cluster of other behaviours associated with ADHD, these include; insatiability, social clumsiness, poor co-ordination, disorganisation, and specific learning disabilities. These behaviours cause difficulty with the child's development, behaviour and performance, family relationships, and social interaction.

These problems and their consequences often endure into adolescence and adulthood, placing children with ADHD at significant long-term risk for academic, psychological, and social morbidity.

[2] Frick PJ., "The nature and characteristics of ADHD" *Sch. Psych.Review.*, 1991;20:163-73.

2.3 History

ADHD is not merely an invention of the twentieth century; children with extremely poor concentration and impulsive behaviour have always been with us. However the labels for this disorder have been varied and changing.

The condition can be traced back as far as the ancient Greeks. They attributed the disorder to a disturbance in the levels of body humours. In 1902, English physician, Dr George Still described children with attentional deficiencies as "Fidgety Phils" and it was thought an in built hereditary deficit in moral control was to blame for the condition.

After an encephalitis epidemic in the USA in 1917-1918, interest in the syndrome was rekindled. Many children who acquired encephalitis were left with attention difficulties, overactivity and impulsivity. These are all features of ADHD. The encephalitis virus was thought to have damaged the part of the brain that is immature in children with ADHD. And hence their symptoms were similar. Later it was noticed that children who had suffered brain damage showed similar behavioural patterns and the syndrome were labeled as 'minimal brain damage'. When it was realised that many children affected with this disorder of behaviour did not have any detectable brain damage it was termed 'minimal brain dysfunction'.

During the seventies the coin phrase was 'hyperactivity' and this label stuck until the early eighties when the term ADD or Attention Deficit Disorder came on the scene. This was joined by ADHD in the late eighties, which described the disorder in which hyperactivity was present in addition to the attentional deficits.

2.4 Epidemiology

ADHD is one of the most common conditions of childhood. With increasing awareness and acceptance of ADHD as a diagnosis the prevalence of the syndrome in the community has also appeared to increase. The figure usually given for the prevalence of ADHD in the general population is approximately 3%-5% of school-age children. This figure does not take into account however, preschool, adolescent and adult population. "Australian studies have found prevalence rates ranging between 2.3 and 6 per cent." [3]

The incidence of ADHD appears to be higher among boys than girls. Prevalence rates between boys and girls range from a ratio of 3-1 to as much as 5-1. Amongst boys, it appears firstborn males are at the greatest risk of developing ADHD. ADHD in girls is associated with more severe cognitive and language deficits and greater social liability. Also, ADHD without hyperactivity in girls is more likely to be missed than the equivalent in males. This would be in part due to the quieter and calmer natures expected and seen in girls as a general rule.

"ADHD presents 'democratically' in the population. It appears across a wide variety of individuals, in all races, and ethnicity's, in all socioeconomic groups, in 'geniuses' and people with mental retardation, and in those with high and low ego functioning." [4] Although ADHD occurs in children from all socioeconomic groups, it may present more often in those from disadvantaged and disturbed homes. This is in part due to the child inheriting the social and behavioural traits of ADHD that predispose to environmental disadvantage. The situation is exacerbated by the inconsistencies and inflammatory management found in such an environment.

[3] Green, C., "Management of Attention Deficit Disorder: a personal prospective", *Modern Medicine of Australia* Vol. 37, No.2, pg. 38-53.

[4] Popper, C.W., "Antidepressants in the treatment of ADHD" *Journal of Clinical Psychiatry*, 1997; 58 suppl. 14 : 14-29.

"Siblings of children with ADHD are at high risk to develop [ADHD], as well as to develop other disorders, including disruptive behaviour disorders, anxiety disorders, and depressive disorders." [5] Parents of children with ADHD are also shown to be at an increased risk of morbidity. They are seen to have an increased incidence of "hyperkinesis, sociopathy, alcohol use disorders and conversion disorder" [6]

Though the first behaviours of ADHD are usually apparent in pre-school, or even infancy, the majority of children are not diagnosed until they start school and are within a formal learning situation which requires structured behaviour patterns.

It has now been recognised that ADHD is a serious and significant disorder. A child does not simply "grow out" of their symptoms. ADHD is a chronic condition, the symptoms of which can persist into adolescence and adulthood. In general the symptoms that persist into adulthood are largely cognitive, reflecting some degree of developmental improvement in behavioural symptoms such as hyperactivity and impulsivity. It is now believed that "approximately 60% of those affected will take some of their symptoms into adulthood" [7] while 8% will still fulfill the diagnostic criteria for ADHD. [8]

More than half of children with ADHD will also have associated learning difficulties. Usually in reading and writing skills or arithmetic. ADHD is also often present in conjunction with other behavioral disorders. It is quite common for chidden with ADHD to have ODD (**O**ppositional **D**efiant **D**isorder) or CD (**C**onduct **D**isorder) as a comorbidity or so-called "fellow traveller."

[5] Cantwell, D.P., "Attention Deficit Disorder: A Review of the Past Ten Years", *J.AM.Child&Adolesc. Psych.*, Aug 1996, Vol 35.,No.8, pg. 978-87.

[6] ibid. pg. 981

[7] Green, C., Dr., "Attention deficit hyperactivity disorder – clearing the confusion", *Modern Medicine of Australia*, March 1998, pg118-126.

2.5 Aetiology

The aetiology of ADHD is unknown. It is unlikely that a single aetiological factor leads to the clinical syndrome of ADHD. "Most likely there is an interplay of both psychosocial and biological factors that lead to the final common pathway of the syndrome of ADHD" [9] It is certainly a strongly hereditary and biological condition.

When discussing the causes of ADHD it is important to stress the fact that ADHD is not primarily a parenting problem. For too long this disorder has been blamed on "poor parenting" and this is just not the case. Of course bad parenting skills will not help the situation but the first problem is the child's behaviour. The problem often begins with the child's demanding and difficult behaviour, not with poor parenting. Difficult children can make even good parents look bad. ADHD does not respond to many normal behavioural strategies. Parents and teachers alike will end up feeling defeated, frustrated, and often confused.

2.5.1 Frontal Lobe Morphology

As mentioned previously in this chapter, the early thought was that ADHD was the result of some form of brain damage. This idea emerged from the studies of children who had suffered from encephalitis during the encephalitis epidemic of the early 1900s.

More recent studies of brain morphology, with the use of magnetic resonance imaging techniques have revealed that children with ADHD have abnormal frontal lobes. The frontal lobe is the area of the brain responsible for, inhibiting behaviour, sustaining attention, employing self-control, and planning for the future. It has been demonstrated that children with this disorder have a reduced volume in this area of the brain and this somehow relates to altered premotor function.

[8] Popper, C.W., "Antidepressants in the treatment of ADHD" *Journal of Clinical Psychiatry*, 1997; 58 suppl. 14 : 14-29.

[9] Cantwell, D.P., "Attention Deficit Disorder: A Review of the Past 10 Years", *J.Am. Child Adolesc. Psychiatry*, 35:8, August 1996, pg. 978-987.

2.5.2 Glucose Metabolism

The pathophysiology of this disorder has also been investigated with the aid of other imaging techniques including SPECT and PET.[10] These techniques have revealed a deficiency in glucose metabolism in the premotor and superior prefrontal cortices in the brains of ADHD adults. These brain areas are involved in the control of motor activity and attention.

When methylphenidate (Ritalin) is administered its effect showed up as a redistribution of blood flow in the brain. This can be seen as a reduction in blood flow to the vision and hearing areas of the sensory cortex. This filtering of irrelevant stimulation helps concentration.

2.5.3 Inheritance

Family genetic factors have long been implicated as an aetiological factor in ADHD. Heritability is estimated to be between 50-92% compared with environmental causes, which constitute only 1-10% of ADHD cases. [11]

Each child inherits from his or her parent's genes that control the synthesis of neurotransmitters. It is thought that in ADHD that there may be a defect in the gene that controls the synthesis of neurotransmitters.

ADHD may be inherited from the child's' mother or father. Recent studies show that in approximately 25% of cases it is inherited from the father, and in about 20% from the mother.[12] The high concordance rate between monozygotic twins (51%) is further support for the idea of genetic inheritance. Also, if one child in a family has ADHD there is more than a 35% chance of a brother or sister having the condition as well.[13] Adoption studies have also revealed that ADHD running in families is genetic rather

[10] SPECT (**S**ingle **P**hoton **E**mission **C**omputed **T**omography) and PET (**P**ositiron **E**mission **T**omography) enable the blood flow and metabolism in different parts of the brain to be monitored. By using radioisotopes they show which areas of the brain are relatively under or over active.

[11] Barkley, R.A., Ph.D, Taking charge of ADHD: The complete, authoritative guide for parents, Guilford Press, 1995.

[12] Selikowitz, M., All about ADD, Understanding Attention Deficit Disorder, Oxford Press, 1995.pg. 101

than environmental. At this point in time, no gene has been located as responsible, but further research in this area may prove otherwise.

2.5.4 Neurotransmitters

The successful use of stimulant therapy in the treatment of this disorder has lead to the speculation that ADHD may be a result of abnormal catecholamine metabolism. In ADHD children it appears that there is both a reduction and imbalance of neurotransmitters within specific receptive centres within the brain. It is believed that the stimulant medication methylphenidate and dexamphetamine in someway affect the balance of the neurotransmitter dopamine and noradrenaline. However, studies in this area have been inconclusive.

2.5.5 Psychosocial Factors

Psychosocial factors are not thought to play a significant primary role in the development of ADHD. ADHD occurs in children from all socioeconomic groups. However, it may present more often in those from disadvantaged and disturbed homes. This is in part due to the child inheriting the social and behavioural traits of ADHD that predispose to environmental disadvantage.

2.5.6 Diet and Environmental Factors

Some environmental factors have been proposed as possible aetiological agents. These include toxins, such as lead and various food additives, sugar intoxication, and vitamin deficiencies. None of these theories have entertained much support. A doctor first proposed the idea that diet could effect behaviour in the 1970s by the name of Feingold. He suggested that 25-50% of hyperactive children might be helped by a diet restricted in artificial dyes and flavours, some preservatives, and naturally occurring salicylates. Although the Feingold diet was officially discredited in the 1980s, more recent research suggests that diet may contribute to behavioral problems in some children.[14] Diet is now believed to be of help to approximately 1% of children with ADHD.

[13] ibid.pg.102

2.6 The Behaviours

The Core Behaviours

1. INATTENTIVENESS

This is the behavioural trait in ADHD that causes the most problems with school performance. Children who are inattentive are likely to under function for their intellect. Distractibility and flitting from one task to another are aspects of this inattentiveness. They tend to be slow to finish their class work and forget instructions. ADHD children also tend to exhibit poor short-term memory. Strangely, this inattentiveness is selective. These children may be extremely inattentive while doing schoolwork but extremely focused while watching television or playing computer games.

2. IMPULSIVITY

Children with ADHD are deficient in inhibitory behaviour. They have difficulty in waiting their turn, and constantly interrupt. Their impulsiveness causes them to act without thought of the consequences. They also tend to be accident prone and short-tempered.

3. OVERACTIVITY

This trait is evident with constant fidgeting, an inability to stay seated, "can't sit still", and constantly touching things. The child is often described as restless.

There are three sub-types of ADHD;

1. Predominantly Inattentive Type
2. Predominantly Impulsive/Hyperactive Type
3. ADHD combined

When the main sign is poor concentration and inattention, the disorder is deemed Attention Deficit Hyperactivity Disorder; Predominantly Inattentive Type. Where the main symptoms are of the impulsive or hyperactive kind, ADHD; Predominately

[14] Mellor, D.J., etal "ADHD: Perceptions, practice and politics", *Journal Paediatrics and Child Health*, 1996, 32, 218-22.

Impulsive/Hyperactive is diagnosed. When all these symptoms are combined, with a tendency to hyperactivity, ADHD; Combined Type is diagnosed.

Additional Behaviours

- INSATIABILITY

The ADHD child is never satisfied. They will nag and go on and on about a certain matter. This can be one of the most stressful behaviours of the disorder. These children are constantly at their parents for explanations. "But why can't I have that...but why can't I do this.... Etc."

- SOCIAL DYSFUNCTION

The child with ADHD tends to lack a certain "savoir faire". They are unable to pick up on social cues. They misread facial expressions, come on too strong, and act incorrectly for given situations. These children often make friends relatively easily but don't keep them long. It is said that ADHD children are " known by everyone, but liked by no one."

- DISORGANISATION

ADHD children leave their schoolbags on the bus and their homework at school. They are often blind to the mess they make. In high school, these children have difficulty starting projects and the like and are often unaware what is required of them.

- POOR COORDINATION

While a number of children with ADHD are well co-ordinated and perform very well at sport, a number do not. It can present as a major motor clumsiness, but most often it presents as a difficulty in performing two or more actions at once. This includes activities like swimming, tying shoelaces, and handwriting.

- FLUCTUATING BEHAVIOUR

Children have their good and bad days. With ADHD children though the variability is much more extreme.

- LEARNING DISABILITIES

Over half the children with ADHD will have significant weaknesses in some academic area. The difficulties are often in spelling, writing, language, and mathematics.

2.7 Diagnosis and Assessment

The last five years has seen an explosion in the diagnosis of ADHD. In the past there has been an under recognition of what is undoubtedly a behavioural syndrome with a significant biological basis. Currently however, the label ADHD is sometimes used indiscriminately to describe difficult behaviour and school problems of various origins.

There is not one single test that will confirm the diagnosis of ADHD. It is a clinical diagnosis made by either a paediatrician or psychiatrist. Their diagnosis is based on the information gathered from a wide variety of sources; including parents, educators, and health care professionals.

As part of the diagnostic process, the American Psychiatric Association's DSMIV has an established list of characteristics that the child must exhibit for a duration of six months with onset before age seven. The manual states a diagnosis of ADHD cannot be entertained unless a certain number of criteria are met. (See appendix 2)

These guidelines create problems however when a child presents with only five of the required six characteristics listed. Officially this child cannot be diagnosed as having ADHD, and therefore is unlikely to be prescribed any of the stimulant medication offered to the sufferers of ADHD. Yet this child may be of more distress to their parents and teachers, and be performing worse academically, than a child who did satisfy the criteria for a diagnosis of ADHD. In such cases it is suggested to only treat a child when these behaviours begin to cause problems. As Dr Christopher Green has said; "A problem only becomes a problem when it causes a problem".

The diagnosis of ADHD includes; history, examination, psychometric tests, and in some cases neuro-electrophysiological testing. Since there is a high rate of co-existence of ADHD with other disorders of childhood and adolescence, comprehensive assessment includes an evaluation of the individual's medical, psychological, educational, and behavioural functioning.

Some specialists estimate that only three out of every 10 children who are referred to them for assessment of ADHD have the disorder.[15] There is a problem that other conditions may be confused with ADHD. Included in the list of lookalike conditions are; the normal active preschooler, the hearing-impaired child, intellectual disability, specific learning disabilities, autism, brain injury, epilepsy, childhood depression and family dysfunction.

Everyone has some signs of ADHD, because they are so vague. It is important to ask whether these signs are interfering with the child's ability to get on with parents at home or to get on at school." As awareness of ADHD has grown many parents who are concerned about their children's behaviour have seen ADHD as an explanation for behavioural problems that look like ADHD.

2.7.1 History

The history involves gathering and interpreting information from parents, school, previous reports and interviews with the parents and family. Most paediatricans with a lot of experience with ADHD children can usually make an accurate diagnosis from a carefully taken history.

A more formal way of interpreting information from parents and teachers is by using questionnaires. Parents and teachers can complete questionnaires that score specific ADHD behaviours. Among those commonly used are the Connor's Teacher and Parent rating scales (See appendix), and the Achenbach Child Behavioural Checklists. These questionnaires allow for some objectivity both in making the diagnosis and monitoring the effect of treatment.

2.7.2 Examination

The examination is essential to ensure that the child does not have a condition, which may interfere with learning. There are a number of conditions that the paediatrician will want exclude before the diagnosis of ADHD can be made. Vision or hearing impairments can cause similar problems. Intellectual disability must also be excluded. Such conditions may be present in some children, but may not explain all the children's difficulties. Thus it is equally important to establish a diagnosis of ADHD in an intellectually disabled child, as they will benefit from treatment of their ADHD.

The paediatrician will examine the child for any 'hard' neurological signs. This includes checking the child's balance, coordination, muscular tone, and reflexes. The functioning of specific nerves is also tested. Paediatricians may also look for 'soft' neurological signs. These are more subtle signs of immaturity in the way in which the brain processes sensations and controls movements. These signs do not have the same implications as hard neurological signs, but do indicate that the child is not yet functioning as maturely as other children of the same age. Soft neurological signs are very common in children with ADHD.

2.7.3 Psychometric Testing

Psychometric testing involves evaluating the child's areas of strength and weakness. This allows for an individualised treatment program to be planned. An educational psychologist usually carries out this testing. The tests they administer are standardised for different ages. Assessments of the child's reading, writing, spelling, maths and language capabilities are performed.

Psychometric tests have been devised so that the child can be compared with the general population. They enable the tester to determine whether the child is advanced, average, or delayed in different areas of development. A standard intelligence test is given to ensure that intellectual slowness is not the cause of the poor behaviour and underachievement.

[15] Allen,R., ADD: A guide for parents and teachers, Gore and Osment Publications, 1995.

An important concern about the diagnosis of ADHD is that it depends to a large degree on subjective judgements of parents, teachers and physicians. All children, at sometime display impulsive, hyperactive behaviour. The question is at what point within the spectrum of behaviours is it considered to be ADHD? This situation is made more difficult by the fact that parents and teachers may see the particular child in question in different ways. For such reasons, efforts have been made for many years to develop an objective procedure that could be used to diagnose ADHD reliably.

2.7.4 Neurometric Testing

Neuro-electrophysiological testing may be useful to objectively test a child's brain to detect immaturies and inefficiencies of function. One such test is the QEEG. A compurtised quantitative analysis of the EEG signals. It allows the brain activity of a child to be compared to that of a normal child of the same age. Children with ADHD characteristically have immature activity in their frontal lobes. This is illustrated on what is called a "Brain Map". (See **Figure 2.1.**) It represents the numerical findings of an EEG in a pictorial form. In the diagram, the Brain Map of a normal child is compared to that of a child with ADHD. The brain map of the ADHD child is seen to have excess immature activity in the frontal area of the brain. It is seen that this appearance can be corrected by use of medication.[16]

Another objective neurometric test is the Cognitive Event Related Potential, or ERP. This measures the changes in brain electrical activity when a task is undertaken. When an ADHD child concentrates on a specific task they do not produce the strong waves on ERP that normal children do. With ADHD children, the waves are smaller and appear later. Reviews should generally be undertaken every six months after diagnosis to determine how the child is progressing and to modify treatment if necessary.

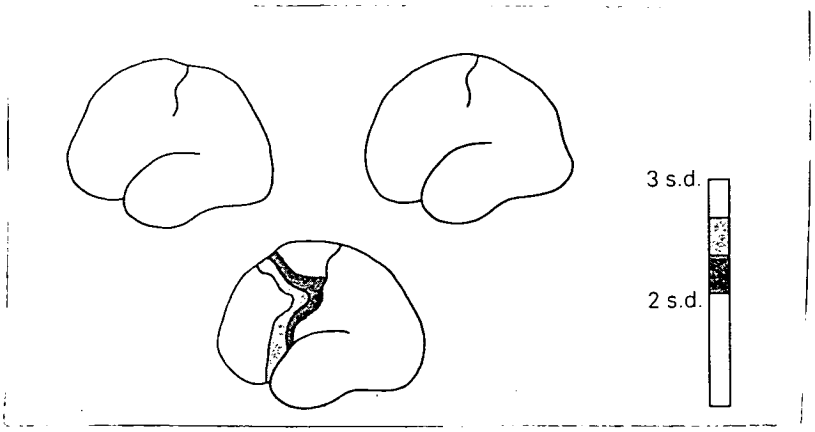

Figure 2.1. BrainMaps : Normal (above left), ADHD before treatment (below), ADHD after treatment (above right). The shaded area shows excess theta activity for age. (s.d. = standard deviation)

2.7.5 Tests of Attention and Persistence

Tests of attention and persistence are probably some of the most useful tests available but they are still not foolproof. One such test is the Computerised Performance Test (CPT). This test requires the child to sit in front of a computer on which various letters, numbers, and symbols are repeatedly displayed. The child is instructed to either respond or refrain from responding according to what is displayed on the screen.

These tests are designed to be extremely repetitive and boring and doing well provides careful concentration so those careless and impulsive mistakes can be avoided. The child's scores are compared with the typical scores of a child of the same age. If the child's ability to concentrate and refrain from making careless mistakes is relatively less than his peers of the same age are, then a diagnosis of ADHD may be entertained.

Study's on the use of CPT as a diagnostic tool has shown however that this test has a low specificity and sensitivity. " If we were to rely on a CPT score alone to decide whether or not a child had ADHD, then as many as 25% of children with ADHD would be only be used as an adjunct to the more common subjective diagnostic methods as 'normal'."[17] An equal number of children without the disorder would also be diagnosed as having the disorder. It is for this reason that many professionals

[16] Selikowitz, M., All About ADD: Understanding Attention Deficit Disorder, Oxford Press, 1995.
[17] *Child Psychiatry and Human Development*, Vol 28, 1998.

believe that objective forms of assessment such as CPT should only be used as an adjunctive to the traditional, if more subjective, clinical diagnosis.

2.7.6 Co-morbidity

Co-morbidity is a major problem in children, adolescents, and adults with ADHD. As many as two thirds of school-age children referred for diagnosis have at least one co-existing psychiatric disorder.[18] The major co-morbid conditions include language and communication disorders, learning disorders, conduct and opposisitional defiant disorder, anxiety disorders, mood disorders, and Tourette's syndrome.[19]

Co-morbid behaviours tend to increase in frequency with increasing age. Co-morbid conditions often develop as the ADHD child moves into adolescence or adulthood. It is common for an ADHD child to develop Oppostional Defiant Disorder (ODD) in adolescence. This may develop into Conduct Disorder in adulthood. Many ADHD adults will also have other co-existing problems, such as alcoholism, depression, and substance abuse.

The increase in co-morbid behaviours is a good reason for early intervention rather than waiting for an ADHD child to "grow out" of their problems. If untreated, the risks of greater problems in later life are increased in ADHD children.

Percentages of ADHD children with co-morbid disorders;

- ODD (60%)
- Anxiety Disorder (20-30%)
- Conduct Disorder (35%)
- Socialisation Disorder (40-60%)
- Psychosomatic illness (20%)
- Bright ADHD children (5-10%)
- Thought Disorder (4-10%)
- Hypoactive children (2-5%)

[18] Cantwell, P., "Attention Deficit Disorder: A Review of the Past 10 Years.", *J. AM. Child Adolesc. Psychiatry*, 35:8, August 1996.

[19] A French neurologist, Gilles de la Tourette, first described Tourette's syndrome. The major feature of this syndrome is a tic featuring involuntary, body movements such as grimaces, shrugs, and grunts and sometimes compulsive utterances.

- Anti-social delinquency (5-20%)
- Suicide (2-5%)[20]

2.7.6.1 ODD (OPPOSITIONAL DEFIANT DISORDER)

Approximately 60% of all children with ADHD may develop ODD, particularly if they have not been managed well.[21] Fortunately as children with ADHD are now being recognised earlier, fewer are developing ODD later on.

In general, the child with ODD behaves just as the label suggests. They are consistently hostile, argumentative and defiant. They often lose their temper, deliberately annoy and provoke other individuals, and refuse to accept authority. Children with ODD often deny the consequences of their behaviour and tend to blame others for their inadequacies. These children often swear in situations that normal children of the same age would know was inappropriate.

While many parents with ADHD children may feel that this adequately describes the behaviours shown by their child, a professional such as a paediatrician, psychologist, or psychiatrist must be consulted for a formal diagnosis. A technical description of ODD is listed in DSMIV. (See appendix)

2.7.1.2 CD (CONDUCT DISORDER)

ODD may occur alone, though frequently it extends to merge with the behavioural disorder known as CD (Conduct Disorder). CD is more severe than ODD and occurs in about 5% of children with ADHD.[22] Conduct Disorder differs from ODD in that the problem attracts a greater degree of social disapproval and can often lead to the child breaking the law.

A classic ADHD child is impulsive and unaware of consequences, but often is remorseful afterwards. A child with conduct disorder is also impulsive but can often be very deliberate and is rarely remorseful.

[20] Selikowitz, M., All About ADD: Understanding Attention Deficit Disorder, Oxford Press, 1995.
[21] Ibid. pg.93

A general description of a child with CD is one who is aggressive, who destroys things, is deceitful, steals, and seriously violates rules. The behaviours that can be displayed by children with this CD include;

- stealing
- bullying
- fighting
- using weapons
- lighting fires
- truanting
- running away
- substance abuse
- physical cruelty to animals

A child does not need to display all of these behaviours. They can display as few as three of those behaviours over a period of time. (See appendix 3)

The majority of ADHD children with conduct disorder do not begin with CD, although they are born with ADHD. Most often CD is either a product of seriously dysfunctional families or very negative schooling, or they gradually develop behaviour from ODD. A small minority of ADHD children appears to have been born with CD.

Co-morbidity complicates the diagnostic process and can have an impact on the natural history and prognosis and the management of children with ADHD. Assessment and treatment of a co-morbid disorder is just as important as diagnosing and treating the ADHD itself.

[22] ibid.pg.97

2.8 Treatment-Management

2.8.1 Multi-modal Therapy

It has now been recognised that an ADHD child is most effectively treated by a multi-modal treatment plan. A multi-modal approach combines psychosocial interventions and medical interventions. These can include;

- stimulant drug therapy
- parent management training
- school management
- immediate behaviour modification
- individual counselling
- remedial work and specific therapy
- support network building
- self-esteem enhancement
- social skills training

Because of ADHD's complexity, successful treatment requires a multidisciplinary approach reflecting the collaboration of many professionals. Parents and teachers must have assistance in dealing with children with ADHD. Research has shown that if treated and with appropriate family and social support, many individuals with ADHD can develop effective coping strategies and go on to lead a rewarding and successful life. Children who are treated with multiple therapies are less likely to present with delinquency in adolescence and poor social outcomes.

2.8.2 Medication

There is evidence from many sources that implicates low levels of neurotransmitters within the frontal lobe of the brain as the cause for ADHD. On the basis of this evidence, the ideal treatment for ADHD would be a medication that increased levels of these neurotransmitters within this part of the brain. Several such medicines exist. Every child who is diagnosed with ADHD should be considered for treatment with one of these medicines. Ideally, medication should be started at an early age before any problems with the child's self-esteem, social development, learning abilities and family stress have an irreversible effect. Any behavioural and educational

interventions that are made while a child is adequately medicated will have greater benefits than for a child who is un-medicated or inappropriately medicated.

Medication was first used in the treatment of behavioural disorders such as ADHD in 1937, when dexamphetamine was discovered to help children who had difficulties in sustaining concentration. Ritalin has been used for the same purpose since 1957.

2.8.2.1 STIMULANT MEDICATION

In a normal child stimulant medication would increase neurotransmitter levels above normal, resulting in over-stimulation and over-activity. This medication has a paradoxical effect in the ADHD child however. In an ADHD child they make the child more focused and less restless. This is due to the fact that they are stimulating under active parts of the frontal lobe that are involved in sustaining attention. The medication increases the levels of neurotransmitter in this area of the brain to normal or near normal levels.

The primary pharmacological agents used to treat ADHD are the CNS stimulants. In Australia two stimulants are commonly used; Ritalin (methylphenidate) and dexamphetamine. "Currently between 0.6 and 1.5% of the male childhood population in Australia have been prescribed stimulant medication." [23]

Dexamphetamine and Ritalin are, on paper equivalent, both having similar methods of action and side effects. Although Ritalin and dexamphetamine are related, they have different effects on the neurotransmitter pathway. For this reason individuals may respond better to one drug than the other.

Within Australia, at present, there is a price difference to the consumer between the two stimulant medications. The commonwealth government subsidises dexamphetamine as it is listed on the Pharmaceutical Benefits Scheme (PBS). Ritalin is not subsidised to the consumer by this government scheme. The only way that parents can get help in the payment of Ritalin is through private health insurance.

[23] Robinson, M.J., & Roberton, D.M., Ed. , Practical Paediatrics, 4th Edn, Churchill Livingstone, 1998.

Parents with ADHD children may be eligible for the Child Disability Allowance (CDA) from the commonwealth government. If successful, this allowance can be used towards the cost of medication.

Due to the significant price difference, dexamphetamine is usually trialed first. (One-month supply of dex. is $16 as opposed to $70 for Ritalin) There are some children who receive no benefit from dexamphetamine however, and others who are adversely effected by it. With such expenses many parents find they cannot afford the medication that best suits their child.

The peak actions of the stimulant medications are 2-4 hours and 1-2 hours for dexamphetamine and Ritalin respectively. Changes in behaviour are seen within 20-60 minutes of oral ingestion of the stimulant. Peak action is observed at 90-180 minutes. The duration of action of the drug is 4-8 hours. Side effects can persist longer than the therapeutic effects, but have usually subsided within 24 hours. Side effects lessen over the first week of stimulant treatment.

Dosage and Administration

The usual regime is to start with early morning dose, followed by a dose at noon if needed. Morning activities often require most concentration and a noon dose may be unnecessary. If problems at home are also severe a third dose in the afternoon may also be required.

Side Effects

- decreased appetite
- headache
- stomachache
- insomnia
- 'rebound effect'[24]

[24] The rebound effect is a deterioration in behaviour that follows the wearing off of short acting stimulants. The rebound period may be half an hour or more, and is usually a worsening of behaviour above the baseline behaviour. This occurs in a minority of children. Rebound can be managed by the use of longer acting drugs that seem to have a smoother onset and offset.

- weight loss
- growth suppression
- Tearfulness

During the 70s medication was out of favour due to some bad, uninformed publicity. This also coincided with the introduction of the Feingold Diet. Feingold was a doctor who believed that it was specific additives in a child's diet that caused these behavioural problems.

While parents of ADHD children agree there are some foods that make their behaviour worse, it is not the cause of such disorders. At the end of the seventies it was realised that diet change was not the whole answer and medication came back into favour. In the nineties medication is still paramount in the treatment of the disorder, however it is only part of the management of ADHD.

Benefits

Approximately 50-80% of children with ADHD is responsive to stimulant therapy. Stimulant therapy enables children with ADHD to concentrate for longer periods, complete tasks and therefore reduce disruption and negative comments in both the home and school settings.

Medications target classroom behaviour, academic performance, and productivity. Interactions between the child and peers, family, siblings, teachers, and significant others also improve. Stimulant behaviour improves a child's focus thus making the behavioural management more successful.

There is no evidence that stimulants produce long term benefits in children with ADHD. It has been shown conclusively that stimulants produce a significant improvement in the short term, long -term benefits are at present only presumed.

However, if these drugs can create a better academic, behavioural, and social environment today, the chances are that the benefits will continue in the future. It must be noted that while the long-term benefits of stimulant medication are not proven, neither are the long-term effects of the alternative therapies, e.g. Behavioural programs, diet, remedial education etc.

2.8.1.2 NEW STIMULANT MEDICATION

A relatively new stimulant drug that is being used more frequently to treat ADHD is Adderall. Adderall was initially approved for the treatment of obesity in the 1960s. In 1994 it was approved for use in treating ADHD. Its relative advantages over Ritalin are its duration of action. Adderall has been shown to last longer than Ritalin and therefore requires less frequent doses. This has a number of advantages. Firstly it increases compliance and secondly children on Adderall are less likely to suffer the "rebound effect".

2.8.1.3 NON-STIMULANT MEDICATION

Although Ritalin is still the most widely prescribed medication for treating ADHD, and the safety and efficacy of this medication are well established, not all children do well on this medication. Some do not show the response to the stimulant that most do, and others suffer side effects that make the ongoing use of Ritalin problematic. For this reason the development of new medications to effectively treat this disorder is of great importance. The use of non-stimulant medication to treat ADHD has recently been trialed. The medications evaluated for their efficacy in treating ADHD are the antidepressants, anti-anxiety agents (clonidine), neuroleptics, lithium, and the anticonvulsants.

Tri-cyclic Antidepressants

The best studied of the non-stimulant medications are the tri-cyclic antidepressants. " Some studies have suggested that approximately 70% of children with ADHD will respond to desipramine [a tri-cyclic antidepressant] at doses up to 5 mg/kg per day." [25]

[25] Popper, C.W., "Antidepressants in the Treatment of ADHD", *Journal Clinical Psychiatry* 1997, Vol.58. PG. 14-29.

Tofranil (Imipramine) and the other tri-cyclics have been used for many years to treat bed-wetting in children as well as depression in children and adults. In the last decade its usefulness in children with ADHD has been well established. It is used in smaller doses for ADHD than for bedwetting and depression.

Tofranil is a long acting medication and remains in the body for eight hours after ingestion. It is given regularly to achieve a steady level in the blood. For this reason the exact timing of dose is not as critical as for the stimulants.

Dosage and Administration

Tofranil is given seven days a week to maintain a steady level within the bloodstream. The first tablet is given with breakfast; the second can be given at lunchtime, or on return from school. Sometimes a third tablet is given in the evening at well.

Side Effects

Tofranil is used in such low doses for ADHD that side effects are uncommon. When the medication is first started a child may suffer from sleepiness and easy fatigability. This is usually mild however and will resolve within a week or two.
A major side effects of the tri-cyclic antidepressants in general are; cardiovascular, especially arrhythmia's.

Benefits

All of the antidepressants produce positive effects on hyperactivity, impulsivity, inattention, and most likely on anxiety and depressed mood. There is some question about whether there is a major effect on learning." [26]

Anxiolytic Agents

Clonidine is an alpha2- adrenergic agonist. It is useful in the overactive, impulsive and aggressive child who is not adequately controlled with stimulants alone. It helps with overactivity and impulsivity but has little effect on inattention and distractibility. Clonidine is often prescribed in conjunction with stimulants and may offer some adjunctive help in the treatment of associated aggressive behaviour.

Interest in Clonidine as a possible treatment for ADHD began with attempts to treat childhood Tourette's syndrome. It is now used for children with Tics or Tourette's who are unable to tolerate stimulant medication for their ADHD.

Dosage and Administration

Clonidine is available in two preparations. A 25 microgram tablet, marketed as Dixirit, used for migraine headaches can be prescribed. Catapres can also be used. This comes in a 100 microgram tablet and is usually used to treat high blood pressure.

In the United States, Clonidine is also available as a skin patch. The medication is absorbed steadily from the skin during the day. This avoids the necessity for repeated tablet taking. This form is more expensive than the tablet preparations and is presently unavailable in Australia.

Side Effects

Clonidine is free of any significant side effects when used in the doses usually required for ADHD. Some children may become drowsy when they first start medication but this quickly subsides. There are no appreciable effects on blood pressure at such small doses but some children may fell dizzy if the dose is excessive. In such cases the dose should be reduced.

Benefits

Behavioural benefits are seen in the first 4-6 hours after administration of the drug but affects can last up to 12 hours. It can often take two weeks to get a response from the medication and peak effectiveness is not reached until after a few months. Adverse sedative effects are common when the medication is first started. Up to 70 % of patients prescribed Clonidine respond favourably.

[26] Ibid. pg16

Buspirone, an antianxiolytic drug, has also shown preliminary promise as a treatment for ADHD. " [Buspirone] has been used since 1984 to treat children and adolescents with anxiety disorders. The side effects to buspirone are reported to be uncommon, and only mild or moderate when they do occur."[27] Buspirone has been found to be effective in reducing the core ADHD symptoms and also the oppostional and aggressive behaviour that can accompany the disorder. It is recognised however that these are only preliminary findings and subsequent studies will need to include a larger sample size.

2.8.1.4 STIMULANT MEDICATION AND SUBSTANCE ABUSE

A similarity between the way Ritalin and cocaine affects the brain has been found by United States researchers. They suggest that cocaine may have a bigger impact on people who were treated with Ritalin, thus increasing the risk of developing a dependency for cocaine. Animal experiments support the claim that Ritalin may encourage cocaine use. Research by Dr Nora Volkow in New York has used PET to find the distribution of Ritalin in the human brain is similar to the distribution to of that of cocaine. Other researchers do not agree with this suggestion. In another study at Montreal Children's hospital people who had taken Ritalin for 3-5 years were compared with an ADHD non-Ritalin group and non-ADHD group. No difference in substance abuse was found between the groups.

There is some evidence to suggest ADHD children are more likely to grow into adults who smoke and abuse alcohol, but whether or not this is due to prior Ritalin use or to the circumstances that ADHD often leads these people to. i.e. poverty, uneducated. There have also been reports in the media recently about the abuse potential of stimulant medications. This includes stories of children selling their own medication at school.

A study related to this area of concern was published in June 1998 issue of the Journal of Developmental and Behavioural Paediatrics. The study, which was conducted in

[27] Journal of American Academy of Child and Adolescent Psychiatry, April 1998.

Wisconsin,USA, described the stimulant use and abuse as reported by schoolteachers and students themselves diagnosed with ADD/ADHD.

Five years after they were identified as responding positively to Ritalin, the children were surveyed about their experiences taking medication. School principals were also surveyed about medication use policies in their schools. It was reported that no child believed that the stimulants, as prescribed could lead to abuse.

16% of the children indicated however that that had at some stage been approached to sell, give or trade their medication. 44% of students and 37% of principals indicated that the medication was stored unlocked at school, some schools did not have written policies concerning prescription drugs, and 10% of schools allowed children to carry out their own medication.[28]

Not only does this study highlight the opportunity for the potential abuse of stimulant medication, it also addresses the issue of medication policies within schools and the role in which the school can play in the administration and supervision of medication for children with ADHD.

2.8.1.5 MEDICATION AND THE SCHOOL

The majority of children with ADHD who are medicated are required to take a dose of their respective medications during the school day. Due to the nature of the disorder, the majority of ADHD children are not capable of remembering for themselves to take their medication when required. This places a significant responsibility on the school and the teacher to assist in the medication of children with ADHD.

A schoolteacher spends a significant part of the day with a child and is in a good position to assess how effective medication is. Their observations on the child's behaviour and concentration can help the physician decide on appropriate medication doses and timing. While the medications prescribed for ADHD are generally safe, they may rarely cause some side effects in some children.

[28] Journal of Developmental and Behavioural Paediatrics, Jun 1998, pg. 187-192.

Dosages and timing of medication need individual adjustment. Dose timing should be tuned to suit the school day. The most demanding and whole class activities should be performed when the medication is acting most strongly. Teacher observation of medication, response in the classroom and playground, is an integral part of the management. Teachers can provide essential, critical, objective information on the student's responses to the medication and other interventions.

Medication is often not enough to satisfy the comprehensive therapeutic needs of children with ADHD and is usually but a facet of the multi-modal regime. Individual psychotherapy, behaviour modification, prenatal counseling, and the treatment of co-existing learning difficulties may also be required. The beneficial effects of medication are decreased significantly in the presence of unadressed emotional or educational needs.

2.8.1.6 PRESCRIBING RATES FOR STIMULANT MEDICATION

There has been debate within the medical, educational and general community regarding the apparent increase in the number of children diagnosed with ADHD and their management with stimulant medication. Results from a study that examined the national trends in the use of stimulant medication for ADHD in Australia has found a significant variation between states.

The study published in the Journal of Paediatrics and Child Health in 1996 found that there are significant variations in the use of stimulant medication in children among the different states and territories of Australia. Prescribing rates varied greatly. In Western Australia 1.6% of boy's age 5-16 [29] were estimated to be taking stimulant medication. Whereas in Victoria only 0.2%. [30] Variation in the results can in part be explained by the differing legislation governing the classification and prescription of stimulant medication between the states and territories.

[29] Valentine, J., et al, "National trends in the use of stimulant medication for attention deficit hyperactivity disorder" *Journal of Paediatrics and Child Health* (1996) 32, p.g. 225.
[30] Ibid.p.g. 225.

The variation amongst prescribing rates indicates that there may be some inconsistencies in the diagnosis of ADHD and the prescription of stimulant medication. The reason that W.A has the highest of prescribing rates is not entirely clear. It may be due to the fact that there is a larger private sector managing children with ADHD. Also the community and Education Department have become increasingly aware of the disorder and are referring more and more children for assessment.

It was the conclusion of this study that further trends in prescription rates should be monitored. In the future it may be necessary to institute national guidelines for the prescription of stimulant medication.

2.8.3 Behavioural Management

There has been a long line of attempts to treat ADHD with measures that do not involve pharmacotherapy. Behavioural therapy alone has proved to be of modest effect in many milder cases of ADHD. Paediatricians and child psychologists can help develop techniques for helping children, including regular routines, encouraging activities such as sports and productive games, and the development of self-esteem.

2.8.3.1 BEHAVIOURAL MODIFICATION THERAPY

The theory of behaviour modification is based on psychological principles that if you reward a behaviour then that behaviour increases and if you discourage a behaviour it decreases. When an undesirable behaviour is underplayed it is less likely o happen again.

It is important that any behavioural modification program be incentive based. Programs based only on negative reinforcement or deprivation of privileges are not as effective as those are with incentives.[31]

Rewards for good behaviour should be immediate, impressive and frequent. If a child has behaved well during story time at school or while a friend is visiting the home,

they should be rewarded at that time, not at the end of the day. Rewards can either be given as attention, or more 'hard rewards', such as handing out stamps, tokens and privileges.

Similarly consequences for bad behaviour should also be immediate. There is no use punishing a child with ADHD by telling them they will be deprived of a privilege the next week. By that time they will have forgotten why they have been denied the privilege in the first place and that will do nothing to stop the behaviour you are punishing them for from reoccurring.

Verbal praise is crucial for a child with ADHD and is especially effective if the positive behaviour is also clarified e.g. "I like the way you are playing so nicely with the other boys. "Initially, praise may not be an adequate enough incentive to continue the good behavior as these children have a lower sensitivity from feedback from his/her social environment. Thus, they may require more powerful or more frequent rewards to begin with.

The use of some sort of a token as a reward is very effective in reinforcing good behaviours in children with ADHD. It may be necessary to give verbal praise along with the material reward to teach the appropriate behaviour. In time the verbal praises alone may be adequate to maintain the behaviour.

Cognitive-behavioural interventions have been employed with notable success. Whether as individuals or in groups, patients can learn strategies for slowing down impulsive responses, focusing attention, double-checking for corrections, managing aggressive impulses, making changes to create a stabilizing environment, and enhancing social skills.

[31] Garber, S.W., etal, If your child is hyperactive, inattentive, impulsive, distractible. Helping the ADD Hyperactive child. Vilard Books, New York.

2.8.3.2 APPLIED BEHAVIOURAL ANALYSIS (ABA) THERAPY

This therapy is now available in Australia from psychologists and individuals trained in the therapy. It was initially developed as a treatment for children in the autistic spectrum but it has been successful in the behavioural management of children with ADHD and other challenging behaviours.

In ABA therapy, an overall task is broken up into the smallest number of steps.
e.g. Steps involved in washing hands(walking to bathroom, turning tap on...etc.)
Each individual step is mastered before going onto the next step. This therapy is very intense, one on one, and fast paced.

The child is rewarded when they display the behaviour that is wanted. This is done by giving a hug, lollies etc. Unwanted behaviours are ignored or discouraged. A reward is not offered for every good behaviour displayed but randomly, so that the child endeavors to display the good behaviour every time incase they get a reward. The therapy is individualised specifically for each child. A wide variety of behaviours are treated; tantrums, sleeping, toileting, social skills, etc.

It teaches children, like ADHD children, who are less responsive to cues from their environment, how to learn from their environment. The children are prompted on the third request of a certain behaviour. In this way a child always succeeds.

This is one of the greatest benefits for children using this therapy, an increase in self-esteem. It is errorless learning. The prompting method allows the child to succeed 80% of the time, which increases their self-esteem by decreasing the frustration of failure.

2.8.3.2 PARENT COUNSELING

Parent counseling is very important for promoting environmental changes that enhance a child's functioning. Children are often dependent on parents and teachers to make these environmental accommodations, whereas adults with ADHD are able to make the adjustments themselves to enhance their functioning.

Increasing the understanding of people close to the child with ADHD, and altering some counter-productive or non-adaptive responses of family members can also be effective. Both adults and children with ADHD are typically unable to accurately or fully perceive their ADHD symptoms. So it is helpful for the prescribing physician to supplement the patients self-reports with a family member.

Parent management has been shown not only to reduce the child's disruptive behaviour in the home but to also increase the parent's own self confidence in their competence as a parent and thus decreases family stress.

2.8.3.2 PSYCHOTHERAPY

Psychotherapy has no direct therapeutic effect on ADHD, but it often can be helpful in managing co-morbid behaviours, reducing anxiety, and improving coping responses, and thereby exert a therapeutic influence on ADHD symptoms.

2.8.3.3 SOCIAL SKILLS TRAINING

This is perhaps one of the most neglected areas of ADHD management, and yet it is one of the most important. Poor social skills can lead to great difficulty in childhood and even more dramatic and damaging problems in adolescence and adulthood.

ADHD children may be caring, affectionate and protective with younger children and love animals but they don't cope well with peers and intense social situations. It is a problem that still exists when many of the other ADHD problems are not as severe.

The importance of peer relations in the outcomes of children with ADHD has been considered in a study that followed boys who had been diagnosed with ADHD over a four-year period. Amongst other behaviours and emotional states, the boys peer relations were paid close attention to. " Those children who were identified as having difficulty with social relationships were at significant increased risk of developing later conduct disorder, and substance abuse, than those children who had good peer relationships." [32]

[32] *Journal of Consulting and Clinical Psychology*, 1997, pg. 762

This study emphasises the importance of peer relations in the long-term development of children. It would seem that those children who have difficulty in making friends and getting along with peers regardless of whether or not they have ADHD are at an increased risk of a variety of negative developmental outcomes. Thus it may be important for parents and carers of ADHD children to pay close attention to how their child is interacting with friends and with peers. Helping their ADHD child to make and keep even a single good friend can make a significant difference to the child's development.

"Children with ADHD have great social potential but need help and guidance to achieve it. While they have weaknesses in social skills they also have strengths. They can be very stimulating and full of fun. They can have an infectious energy and spontaneity."[33] ADHD rarely hold grudges and are often fiercely loyal and protective of friends and the disabled. "In later life, if they learn to control their weaknesses they can be real 'people persons'."[34].

2.8.4 Diet

The issue of diet as a cause and possible management option has been controversial ever since the original Feingold Diet was discredited in the 1980's. Evidence has now been mounted again in recent years that diet can play a role in child behavioural problems. The official NHMRC recommendation (1997) was that if diet was to be instituted, it should be under supervision of a qualified dietitian. It is not a routine management strategy at this stage.

Multi-modal management of ADHD is the current dogma in the treatment of ADHD. However, some recent studies have raised questions regarding its effectiveness. These recent studies examined the interactions of pharmacotherapy with cognitive-behavioural therapy in one case and parent behavioural guidance in the other. These studies found that both pharmacological and psychosocial approaches are effective,

[33] Wallace, I., You and Your ADD Child, Harper-Collins Publishers, 1997. Pg. 176.

[34] Ibid. pg. 177

that psychostimulant treatment is more effective than psychosocial treatment, and that combined treatment is not more effective than psychostimulant therapy alone. In short, these studies suggest that multi-modal treatment may add little beyond what psychostimulant behaviour will do alone. [35]

2.9 Course and Prognosis

The course of ADHD is highly variable. Symptoms may persist into adolescence or adult life; they may remit at puberty; or the hyperactivity may disappear, but the decreased attention span and impulse control problems may persist. Overactivity is usually the first symptom to remit. Distractibility is usually the last.

Persistence of the disorder is predicted by a family history of the disorder, negative life events, and co-morbidity's such as conduct disorder, depression, and anxiety disorders. Remission of ADHD is unlikely to occur before the age of twelve. When remission does occur it is usually between the ages of 12 and 20.

A productive adolescence and adult life, satisfying interpersonal relationships, and few significant sequelae may accompany remission. Most, however, who have a remission are prone to antisocial behaviour, substance abuse disorders, and mood disorders. Learning difficulties that were not adequately dealt with during childhood tend to persist throughout life. "In about 15-20% of cases, symptoms persist into adulthood." [36]

Children whose symptoms persist into adolescence are at high risk of developing conduct disorder. Optimal outcomes may be promoted by removing any social dysfunction, diminishing aggression, and improving family situations as early as possible. "It seems likely that ADHD children with healthy ego functions and strong family support may have a lower rate of antisocial outcome than average ADHD

[35] Popper, C.W., "Antidepressants in the treatment of ADHD" *Journal of Clinical Psychiatry*, 1997; 58 suppl. 14 : 14-29

[36] Barkley, R.A., Ph.D., Taking charge of ADHD: The complete, authoritative guide for parents, Guilford Press, 1995. p.g.152.

children in the average environment, who might be pulled toward antisocial coping mechanisms as a means of coping with the ADHD symptoms." [37]Those ADHD children with the best prognosis are those with mild ADHD, a high IQ, positive family environment, and well-adjusted parents with a stable marriage.

In the following chapter the impact that school management can have on the behaviours outlined in the literature review will be discussed. In chapter four the impact that the behaviours and consequences of the disorder can have on the family will be addressed.

[37] Popper, C.W., "Antidepressants in the Treatment of ADHD", *Journal Clinical Psychiatry* 1997, Vol.58. pg. 16.

3. THE ROLE OF THE SCHOOL

3.1 Introduction

This chapter will emphasise the important role that the school can play in the management of children with ADHD. It will discuss the particular problems that children with attentional and behavioural problems have at school and the ways in which the teacher and the school can best manage these problems to help the ADHD child realise their full potential.

ADHD has become an important policy issue for educational systems.
This chapter will address various educational policy issues that are relevant to children in the average classroom with special needs. It will highlight the need for the review of such policies so that they accommodate the needs of children with ADHD and other challenging behaviours.

The average child of school age spends well over a third of his time in the school setting. A child's experiences in the classroom, and in the playground, will effect his academic achievements, the development of his self-esteem, and his social skills. These are the areas which children with ADHD have difficulties. This places a great emphasis on the school and teachers to develop behavioural management strategies that will help children with behavioural disorders such as ADHD develop both academically and socially.

According to the figures for prevalence of ADHD quoted earlier in this document, there is a probability that in any moderate size classroom there could well be as many as four children with the disorder. This is a significant group of students that can be very disruptive to the classroom setting. Thus it is important that teachers are adequately trained to be able to manage children with behavioural problems in the context of a normal classroom such as ADHD so that no child in the class is disadvantaged.

Children with ADHD are often at their most disruptive at in the classroom. Not only do they interrupt lessons and quiet periods, but they also tend to be disorganised, have trouble paying attention, following directions and working independently. "As a result they frequently have academic problems which can range from failure to complete their work to having to repeat a year, and at the extreme end, suspension and expulsion."[38]

Teachers, like parents, have almost daily contact with children with ADHD. Unlike parents, teachers are also exposed to many other children of the same age and are able to use their normative perspective to determine if the referred child is behaving in age inappropriate ways in the school environment. Remembering that the ADHD behaviours must be present in 2 or more settings for the diagnosis to be made. The teachers input is thus integral in the assessment of children with ADHD.

In the past teachers have often had little understanding of ADHD and the needs of a child with this disorder. The education profession has been slow to accept ADHD. Children with ADHD were once labeled as 'lazy' or 'bad' and were often dealt with harshly. Problems with learning were not picked up early and children were not assessed adequately. Parents were blamed for their child's behaviour. Teacher's believing that "there must be a problem at home". Those children who were assessed and diagnosed face teachers and principals who had not heard of ADHD, and were skeptical of its existence. Thus educational programs were not implemented and some schools were uncooperative with supervising medication regimes.

Now there is a growing awareness of ADHD within the education system. It has been realised that ADHD children require special educational interventions but there are yet the necessary services within the school system to accommodate children with special needs such as ADHD.

There is also a need for more diverse and intense teacher training in the areas of ADHD management. Some state education departments have produced guidelines

[38] Allen,R., ADD,A Guide for Parents and Teachers, Gore and Osment Publications, 1995. Pg. 52.

and information booklets about ADHD for teaching staff. There is also an abundance of reference material that interested teachers can access to help them learn more about the disorder, especially if they have an ADHD child in their classroom.
Unfortunately, there are still teachers ignorant to ADHD and although many of these will be willing to become informed about the disorder when faced with teaching a pupil with ADHD, a minority still do not believe that the disorder exists.

To maximise an ADHD child's chances of success it is important to maintain a consistency of management between the school and home environments. This is made easier by using the same strategies in different situations. This is best facilitated by regular contact between the teacher and the parent of an ADHD child. Some methods in which progress can be monitored between school and home are; communication books, periodic reviews, and regular meetings

3.2 Problems the ADHD child has in the school setting

Students with ADHD display behaviours that may be seen in any student. However, students with ADHD display these behaviours to a more severe degree than typically observed in students at a comparable age level.

Behaviours that may be displayed by students with ADHD include;

- difficulty with sustaining attention
- difficulty with listening without being distracted or interrupting
- failing to complete tasks or rushing through tasks and making careless mistakes
- poor organisation
- fidgeting, squirming or excessive movement
- blurting out answers

constantly "on the go"[39]

[39] Department of School Education, NSW, Talk, Time, Teamwork: Collaborative Management of Students with ADHD, 1993.

Adolescents with ADHD may experience difficulties in school because of the increased number of teachers involved in secondary education, the short duration of classes, more emphasis on an individual for self control, organisation and responsibility for the completion of assignments.

3.2.1 Learning Disabilities

ADHD is not generally considered as a learning disability, although the condition certainly impacts on a child's ability to learn. It is estimated that at least half of children with ADHD also have learning disabilities. The areas of academic weakness that ADHD children may have are; writing, spelling, language, or mathematics. The United States Dept.of Education 1994 statistics estimate that 10-33% of children with ADHD has Learning Difficulties. Australian figures estimate that approximately 50% of ADHD children have learning difficulties.

ADHD children with learning difficulties will require more remedial work and tutoring to enable them to overcome the specific difficulty they are experiencing. This may require the help of a teacher's aid or special education programs such as a literacy program, which is present within many government schools.

3.3 Improving performance and behaviour in the school setting

Students with ADHD have needs as diverse as other students in any one class. There is no single educational setting or practice that can be uniformly applied. There are however, some general principles that can be applied within the classroom setting to improve ADHD student's behaviour.

The diagnosis of ADHD does not have to have been made for these strategies to be effective. Similarly, if the child has been diagnosed, and is medicated this does not replace the need for an effective teaching program.

Often, the ADHD child requires teaching methods outside of the mainstream educational models. These students need very particular classroom environments and

management strategies. ADHD children perform better in smaller classrooms, with one-on-one teaching and constant reinforcement. Most ADHD children benefit from being seated in the front row of the classroom, close to the teacher with an uninterrupted view, away from the windows, and other disruptive children. Here the child will be less easily distracted and more able to focus.

Generally, ADHD children are confused by inconsistency, change or disorganized routines. They respond well to predictable, well-organized schedules with rules that are known and clearly reinforced. It is important to signal these children ahead of time when you are changing from one subject to another in a classroom setting, or when someone is coming to visit, in the home setting. They should be reminded of the rewards and punishments before they get into a situation in which they normally misbehave. ADHD children often have difficulty in following verbal instructions. It is often helpful to reinforce verbal instructions with written instructions.

A student with ADHD has difficulty in completing tasks assigned to them. This is not because they are incapable of the work, but they are unable to sustain their attention for the time required to complete the task. It is helpful for these students to be allowed to work on assignments in small increments, thus enabling them to, over a period of time complete the same tasks as their peers. This ensures they are improving both academically and in self-esteem as they are able to comply with the teacher's expectations.

It is important to place emphasis on ADHD student's strengths while recognizing their weaknesses. If a teacher is aware of the child's developmental level and particular strengths they can teach to the child's strengths and abilities. This will enable the child to succeed within its own boundaries. This success and positive reinforcement will encourage the child to try new tasks and continue to learn and succeed.

Successful behavioural intervention includes rewarding appropriate behaviour, giving effective directions and requests, and using consistent methods of punishment. Teachers can benefit in this treatment from professionals such as school psychologists to implement these procedures. If successful, most ADHD children can have their

educational and social needs met with in the regular setting. Collaboration with parents is also important, as home support of the behavioural strategies used at school will enhance the success of the programs at school.

School based intervention should not just target academic performance. Classroom behaviour and peer relationships are also important. It is important for the school to be supportive to the ADHD child and their family both academically and socially.

The use of daily, teacher completed report cards showing the child's progress are important to maintain a good line of communication between the home and school. It also alerts the family to what strategies the school, is using, and what is successful so that a consistent management plan is maintained. The use of incentives and tangible rewards (e.g. stickers), and timeouts can be equally successful at home as in the classroom setting.

3.4 Project for Attention-Related Disorders (PARD)

Between March 1990 and June 1992, 110 children in a San Diego, California School District identified as having attention-related disorders were enrolled in the Project for Attention-Related Disorders(PARD). PARD was developed as a school based program to improve the identification, referral, and management of children with ADHD.

This program co-ordinated medical, psychosocial, behavioural, and educational interventions for each child and provided resources for the school personnel caring for the children with ADHD. "3 years after instituting PARD, about 60-70% of the children showed improvement after enrolment, evaluation, and treatment."[40]

[40] Journal of School Health 1993, Vol.63, No.7, pg. 295.

3.5 Educational Policy Issues

Children with ADHD are, currently, not included in the category of children defined as having 'special needs'. Thus an ADHD child is not entitled to any of the funding received by the states from the federal government. Provisions for ADHD children are addressed at the state level. At present, no federal government policy exists that addresses the needs of ADHD children.

ADHD has become an important policy issue for educational systems. In the USA there is a section in the Rehabilitation Act of 1973 that states that ' schools are mandated to develop procedures for the identification and location of all students with handicaps, defined as physical or mental impairment which substantially limits one or more major life activities.' ADHD, as described in the DSMIV may constitute an impairment under this section. If this were upheld to include those children with ADHD then schools would be faced with the responsibility of locating children who have ADHD and who may be in need of educational accommodation.

In 1993 the Dept. of School Education in NSW developed the educational document "Talk, Time, teamwork: Collaborative management of students with ADHD." [41]In conjunction with specialist medical practitioners. These materials were produced in the hope that they would provide support to teachers and schools through the use of the suggested strategies and proformas. The materials stressed a need for the collaborative approach to the management of students with ADHD. Such a collaborative approach not only produces more consistent support to the students but also facilitates and supports the work of the parents, teachers and doctors.

The document consisted of;
- research-based information for school communities on ADHD, its effect on school performance and supportive measures which can be taken by the school.
- Proformas which are designed to facilitate collaboration

[41] Department of School Education, NSW, Talk, Time, Teamwork: Collaborative Management of Students with ADHD, 1993.

- Posters summarising effective strategies for classroom and medication treatment in ADHD.

3.5.1 State Support Service

The State Support Service is one part of the Department of Education's structure to support students with disabilities and problems with schooling. The State Support Service is responsible statewide for early special education services, services to the deaf and hearing impaired, autistic children and services to students with physical disabilities. In addition the service has an administrative role in the moderation and allocation of Commonwealth and State funds.

In addition to the State Support Service, each of the seven education districts within Tasmania has a support service. These support services are comprised of support teachers, guidance officers, speech pathologists and social workers. It is this service that provides direct assistance to teachers and parents in relation to the needs of young people and this should extend to include those children with ADHD.

The aim of the District Support Services is to assist schools to implement policies and practices that will ensure equitable access to an appropriate education for all students. This department provides the following personnel to assist with intervention;

- Guidance Officers
- Speech and Language Pathologists
- Social Workers
- District Support Teachers

3.5.1.1 Guidance Officers

Guidance Officers are all registered psychologists and trained teachers. They assist schools by:

- supporting students to ensure their intellectual, social and emotional development is maximised
- supporting the wider community- teachers, parents and others- to strengthen their skills in their interactions with students

- providing the psychological assessments of abilities related to learning and development
- providing an advanced counseling service to students, teachers and parents including grief and trauma counseling and critical incident stress debriefing.

3.5.1.2 Social Workers

The focus of the social worker is to provide a social work service in relation to issues that affect students' participation and progress in school.

Some of these issues may be:

- school/home liaison
- personal counseling for students
- support and advocacy for students, parents and staff
- information regarding other services in the community and referral services

Guidance Officers and Social Workers are based in various schools and visit others on a regular basis or on an on-call basis. They can be contacted through the schools or through the Support Service Manager.

3.5.1.3 Support Teachers

Support teachers support the teachers and schools in catering for the diverse needs of their students. They assist schools in the following range of ways:

- supporting students
- working with parents (e.g. Parents as Tutors, Managing Young Children programs)
- helping staff to increase students skills (e.g. social skills in primary and secondary classes)
- helping to plan and formulate individual Education and Support Plans
- classroom management to meet the range of students' needs

The support teachers for the Derwent District are based at the Timsbury Road School in Hobart.

3.5.1.4 Speech Pathologists

The services of the speech pathologists are aimed at assessing and programming for students with difficulties in one or more of the following areas.

- listening skills and ability to understand instructions
- talking and using language
- articulation and production of clear speech
- voice quality
- oral motor skills

The Speech Pathologists for the Derwent District are based at the Chigwell Primary School.

3.6 Inclusion

One positive development within the education department in recent years has been the policy of inclusion. This has seen the inclusion of children with disabilities and special needs into the regular classroom. While children with ADHD are not officially considered as children with special needs, they stand to benefit from this policy.

The inclusion of these children will, in theory, see an increase in the support that is available in the form of resources and human services. This will insure that neither the children in the class nor the teacher is disadvantaged.

The problems that teachers have faced with inclusion have been:

-Insufficient Human Resources

If a child is in need of constant "one on one" teaching, if not enough support teachers or teacher's aides are provided, the individual child suffers, the rest of the class suffers, and the teacher unable to give everyone the attention they feel is needed, feels frustrated.

-Insufficient Time Allowance

-Inadequate Physical Environment

- Inadequate Training and Professional Development

Many teachers realise that they have not received adequate training to help them respond to the needs of a child with special needs. The university offers a specific training course for teachers of Special Education. In the past this area has been

regarded as a specialty, and most teachers of children with special needs have acquired extra training. However it is not practical for all teachers to complete this course. Adequate training in this area needs to be included within the general teaching degree so that the average teacher can feel better equipped to teach these children.

3.7 Public or Private School?

A question often asked by parents is whether or not their child with ADHD would be better served in a Private school rather than within the Public Education System. This really depends on both the private and public school being considered. Private schools may actually be poorer matches for children with ADHD than public schools. There can be several reasons for this. Firstly, some private school's are very rigid in their teaching practices and are unwilling to accommodate for the needs of an ADHD child. If this style of teaching suits the ADHD child this will be fine, but if not, trying to get the school to make the changes necessary to help the child may not be successful. At least in the public school system, children with ADHD are guaranteed certain educational rights under the law that the schools have to (at least in theory) try and meet.

Secondly, private schools tend to draw a population of students that are, on average, from wealthier and better educated families than the typical public school population. As a result, the students tend to be more advanced educationally than students within the public school system. These are of course gross generalisations and there are exceptions within both systems of education.

There can also be important benefits to private schools for ADHD children as well. Private schools generally have smaller class sizes, with an increased attention and structure, and a better-behaved group of peers.

What is most important as a parent when deciding on which school to send a child with ADHD (or any child for that matter) is clearly identifying the type of educational environment that their child is most likely to do well in. If a private school is an affordable option, it should be determined which school including, the public schools,

is best equipped and more importantly, most willing to work with their child in the way that is needed.

4. THE EFFECT ON THE FAMILY

4.1 Introduction

Poor relationships are not only confined to the school environment. The ADHD child's uncooperative, defiant, and argumentative behaviours can cause many problems within the home setting. This chapter will examine this largely neglected issue in terms of the parent-child relationship, the marital relationship and the impact on the siblings of children with ADHD. The wider reaching, longer- term effects that ADHD can have on society if neglected will also be briefly dealt with in this chapter.

Depression, despair, frustration not only effects the child with ADHD, but their families as well. Parents suffer daily emotional and often-physical abuse from these children. Their self-esteem quickly deteriorates and they can begin to doubt their own parenting abilities.

Very few published articles on ADHD even mention the quality of parenting or the need to attend to emotional issues, and psychosocial pressures on the family. Less than 3% of the 1100 articles published on ADHD since 1990[42] have addressed this important issue.

When one family member is experiencing difficulties, it effects the whole family. Parents of children with ADHD may feel like failures. Initially, they may have difficulty accepting their child has a disability. Even if they do accept it, feelings of denial, guilt and anger may surface. While it is important to remove any inappropriate feelings of guilt from parents about their contribution to their child's disorder, the contribution that parents and other environmental factors can have in the development and continuance of the disorder should also be recognised.

[42] Jureidini, J., "Some reasons for concern about ADHD." *J. Paediatric and Child Health*, 32, 201-203.

Various types of parent-child relationships and family dysfunction are found in the families of children with ADHD. "Interaction conflicts with their mothers are more common in younger children with ADHD than other children with ADHD. In the older adolescent range, more noncomplient of negative verbalisations are reported than in families of normal children." [43]

ADHD children can test even the most secure of relationships and many families with ADHD children are broken up, leaving a single parent to struggle alone with a difficult child. A wider reaching social consequence of parents separating can be the increased reliance on the country's social services.

Siblings suffer too, embarrassed and humiliated in front of their friends who find their brother or sister weird. Also, the ADHD child monopoloises so much of the parental time through their demands and needs, that it is quite understandable that sibling resentments may, and do form.

"Having an ADHD child is like spending days with someone walking behind you all day poking you in the back every five minutes. On poke is not so severe, but constant pokes all day are torture".[44]

[43] Cantwell, D.P., "Attention Deficit Disorder: A Review of the Past 10 Years", *J.Am. Child Adolesc. Psychiatry*, 35:8, August 1996, pg. 978-987.
[44] Wallace, I., You and Your ADD Child, Harper-Collins Publishers, 1997p.g.7.

5. METHODS

5.1 Introduction

This chapter outlines the methods and approaches used by the investigator in order to fulfill the aims of this project. The research outlined in this chapter was undertaken to determine the role of the school in the management of children with ADHD and the effects children with this disorder can have on the family. This included a review of the past literature on the subject and the compilation of a questionnaire for family members of children with ADHD.

A number of different resources were utilised by the investigator to acquire information relating to the role of the school in the management of ADHD children and the effect that children with this disorder may have on the family.

A literature review of articles, books, and videos published in the past ten years was also completed. The objective of the review was to summarise the knowledge that has been accumulated about ADHD in the areas of history, epidemiology, aetiology, diagnosis, management, and outcomes. A specific search was made for literature pertaining to the role of the school in assessment and treatment of the ADHD child. The literature was also searched for any information regarding the psychosocial outcomes of the disorder on the family unit.

Professionals within the health and community service sectors were a valuable resource of information for all aspects of the study. Professionals contacted for the purposes of this study included; paediatricians, social workers, and family support workers. Attending ADHD support groups, paediatric clinics and private consultations facilitated contact with these professionals.

Another important contact group for the purposes of this study was the family members of children with ADHD. The majority of this group was contacted by the investigator via various support group meetings held within and around the Hobart

area. It was by interaction with this group of individuals that enabled the investigator to gain insight into the effects that having a child with challenging behaviours can have on the family. The investigator also attended a parent and friends meeting that a family support worker was invited to speak at. This was organised by the parents and friends association within a school that had identified ADHD as a problem that needed to be addressed.

A questionnaire was compiled by the investigator to specifically address the issues of the role of the school and the effect on the family by children with ADHD. (See appendix 1) The questionnaire consisted of Yes/No type answers and short answer questions. Some scope was given for the participant to give free answers.

The participants in the questionnaire were drawn from within and around the Hobart area. These people were accessed via a number of means. The majority of participants were drawn from the ADHD support groups attended by the investigator of this study. Additional participants were recruited from private patients of paediatricians and through the Parenting Centre.[45]

As well as the structured questionnaires that were distributed a number of individual unstructured interviews were held. Participants in the interviews were drawn from the same base of participants as for the questionnaires. These interviews were conducted specifically to discuss the role of the school with parents who had been disgruntled with their child's treatment within the education system.

It was by the means mentioned above that the investigator was able to address the main aims of this project which were to determine the role of the school in the management of children with ADHD and the effect on the family of children with this

[45] The Parenting Centre is a Family and Child Health Service situated in New Town. The centre is for all parents to provide support, information and assistance with any parenting needs. It offers help to people in the southern region of Tasmania within the 002 area code.

disorder. In the next chapter the results of the parent questionnaire are presented. The results are then evaluated within chapter seven.

6. RESULTS

Question 2

Age (years):

20-25: 2 (10%)

26-30: 4 (20%)

31-35: 7 (35%)

36-40: 5 (35%)

41-45: 1 (5%)

>45: 1 (5%)

Question 3

Your Occupation

1. Managers and Administrators	1 (5%)
2. Professionals	1 (5%)
3. Associate Professionals	2 (10%)
4. Tradespersons and Related Workers	-
5. Advanced Clerical and Service Workers	-
6. Intermediate Clerical, Sales and Service Workers	2 (10%)
7. Intermediate Production and Transport Workers	-
8. Elementary Clerical, Sales and Service Workers	-
9. Labourers and Related Workers	-
Unemployed	-
Pensioner	-
Home Duties	13 (65%)
Student	1 (5%)

(Classified according to the Australian Standard of Occupations (ASCO), 2nd Edn.)

Question 4

Relationship to child/children with ADHD:

MOTHER	all
FATHER	-
GUARDIAN	-
OTHER	-

Question 5

Marital Status:

MARRIED	11 (55%)
SINGLE	5 (25%)
DEFACTO	1 (5%)
DIVORCED	3 (15%)

Question 6

Occupation of spouse/partner:

1. Managers and Administrators	2 (14%)
2. Professionals	-
3. Associate Professionals	1 (7%)
4. Tradespersons and Related Workers	1 (7%)
5. Advanced Clerical and Service Workers	-
6. Intermediate Clerical, Sales and Service Workers	1 (7%)
7. Intermediate Production and Transport Workers	-
8. Elementary Clerical, Sales and Service Workers	1 (7%)
9. Labourers and Related Workers	1 (7%)
Unemployed	3 (21%)
Pensioner	2 (14%)
Home Duties	2 (14%)
Student	-

Question 7
How many children do you have?

1 child: 4 (20%) 2: 6 (30%) 3: 5 (25%) 4: 2 (10%) 5: 3 (15%)

Question 8

Age of child/children with ADHD:

1-3 years: 2(8%) 4-6 years: 7(30%) 7-10 years: 9(38%)

11-14 years: 5(21%) > 14 years: 1(4%)

Question 9

Sex of child/children with ADHD:

Male: 23(96%)

Female: 1(4%)

Question 10

At what age was the diagnosis made?

1-3 years: 7 (30%)

4-6 years: 7 (30%)

7-10 years: 8 (33%)

>10 years: 2 (8%)

Question 11

At what age did you first notice any symptoms in your child/children?

1-3 years: 18 (75%)

4-6 years: 6 (25%)

7-10 years: -

>10 years: -

Question 12 Were your child's/children's symptoms more characteristic of ADD or ADHD?

ADD: 3 (14%)

ADHD: 19 (86%)

Question 13

Is there a history of ADHD in your family?

YES 40%

NO 60%

Question 14

How is your child managed?

MEDICATION		18 (90%)
BEHAVIOURAL THERAPY		10 (50%)
SPEECH THERAPY		1 (5%)
OCCUPATIONAL THERAPY		-
SPECIAL EDUCATION SUPPORT		4 (20%)
PARENT COUNSELING		3 (15%)
OTHER	Clare House	1 (5%)
	Diet	1 (5%)

Question 15

What do you think are the most effective forms of management for your child?

Almost exclusively, the most effective form of management was found to be medication. Even if parents had been reluctant to start medication, and it was in cases "the last resort" it was found to be the most effective.

In most cases medication was in conjunction with behavioural management. Most respondents commented that behavioural management can not be applied without the use of medication. "Medication is essential for rewards and behavioural management to be effective", "it is impossible to apply any forms of behavioural management without medication"

Another effective management strategy was a regimented routine with "continual consequences for behaviour". Most respondents noted a strict daily routine as important. "If we stray from the routine, then it is back to square one".

A calm and loving environment was also an important factor in these children's management. Keeping calm and having patience with discipline also played a role. One participant reported the importance of strict diet in her son's management "salicylate, preservatives and colourings can effect his behaviour for up to five days."

Question 17

Do you attend a support group?

YES 16 (80%)

NO 4 (20%)

Question 18

How did you find out about the support group?

The 80 % of the participants in the questionnaire who do attend a support group found out about it through a variety of means. One women was involved with setting up the support group originally with the social worker and family support worker in the area.

A number of the participants said they had become aware of the group via a newspaper article or pamphlet. The support group was also brought to the attention of the participants by a number of health care professionals and health care agencies. These included the general practitioner, the paediatrician, the social worker, the family support worker, and via the Parenting Centre. Friends were also a source of information.

Question 19

How often do you attend the support group?

WEEKLY: 8 (50%)

MONTHLY: 2 (12.5%)

WHEN A PROBLEM ARISES: -

OTHER FORTNIGHTLY: 6 (37.5%)

Question 20

What benefits do you get from the support group?

Of the 80% of the respondents of the questionnaire who said that they attended support groups, the most common answer to this question was the feeling that they were "not alone". Others came because they knew within the confines of the support group meetings that they were accepted. The support group was also a means of releasing stress by talking openly or just "having a shoulder to cry on" or "having a laugh".

As well as a stress release the support group was also noted as a good resource for information. This came from discussing behavioural management strategies with other parents, information from the family support worker or social worker and individual guest speakers that are invited to speak at the support groups.
In addition to discussing techniques for better managing their children's behaviour, the support group was also an opportunity to discuss strategies to manage their own stresses.

Question 21

Whom do you get emotional support from?

PARTNER	6 (30%)
FAMILY	7 (35%)
FRIENDS	10 (50%)
GP	4 (20%)
PAEDIATRICIAN	7 (35%)
PSYCHOLOGIST	1 (5%)
SOCIAL WORKER	4 (20%)
OTHERS: FAMILY SUPPORT WORKER	2 (10%)
PSYCHIATRIST	1 (5%)

Question 22

If you have other children without ADHD;

Do you spend more or less time with your ADHD child/children compared with your non- affected child/children?

LESS 2(12.5%)

MORE 11(68.5%)

OTHER: EQUAL 3 (19%)

Question 23

Do you feel that the needs of your non-affected child(ren) are unmet because of the time you spend with your ADHD child/children?

ALWAYS 2(12.5%)

OFTEN 5(31%)

SOMETIMES 8(50%)

NEVER 1(6.5%)

Question 24

Do you feel that your own personal needs are unmet because of having an ADHD child(ren)?

YES 20 (100%)

NO -

If yes, what areas of your life have been affected because of your child's/children's condition?

MARRIAGE/PARTNERSHIP 9 (45%)

FRIENDSHIPS 14 (70%)

WORK 7 (35%)

HEALTH 12 (60%)

LEISURE TIME 15 (75%)

FINANCIAL 8 (50%)

NONE -

iii. In what way(s) has your life been changed (because of having an ADHD child)?

Of the married people who answered the survey, almost all commented that having an ADHD child had had an impact on their marriage. They had less time to spend with their partners and found that they argued more often. Those who were not married also said that personal relationships were affected.

Intimate relationships were not the only ones to suffer. Most participants reported that they had lost friends or see them less as they are unable to take their children to their houses. Another participant said: "some friends have stopped visiting because I can't just sit down and chat."

Question 25

As a consequence of having an ADHD child(ren) do you ever;

i. feel stressed?

ALWAYS 6 (30%)

OFTEN 12 (60%)

SOMETIMES 2 (10%)

NEVER -

ii. feel depressed?

ALWAYS 2 (10%)

OFTEN 13 (65%)

SOMETIMES 5 (25%)

NEVER -

iii. feel like you are unable to cope?

ALWAYS 2 (10%)

OFTEN 10 (50%)

SOMETIMES 8 (40%)

NEVER -

Question 26

What do you do to manage any problems that you have?

Attending support groups and talking to friends rated highly as an answer. Family members and the general practitioner were also noted as important sources for support. Some respondents said that exercise was a good form of management to use. Walking and aerobics were two activities mentioned. A number of the participants also said they had gone to their general practitioner for medication to help them cope with the depression they suffered from as a result of their child's condition. One woman had even been hospitalised for depression.

Unfortunately, a few responded that they were doing nothing yet to mange their stress or depression. Comments like " I just get on with it, and look to the future" and " I just deal with it, it is my problem, no one else's." Those who have been able to receive respite for their child mentioned how fantastic this was as a form of managing their personal problems.

Question 27

Is your child on medication for ADHD?

YES 19 (95%)

NO 1 (5%)

Question 28

If yes, What medication(s) does/he take for ADHD?

RITALIN	7 (37%)
DEXAMPHETAMINE	5 (26%)
CLONIDINE	1 (5%)
RITALIN AND CLONIDINE	4 (21%)
DEXAMPHETAMINE AND CLONIDINE	2 (10%)

Question 29

i. Has s/he taken any other medication for ADHD in the past?

YES 5 (25%)

NO 15 (75%)

ii. What medication?

All those who had previously been on different medication for ADHD had been on Dexamphetamine.

Question 30

Have you been any problems with your child being given medication at school or childcare?

YES 7 (37%)

NO 12 (63%)

What most participants brought up was the lack of supervision from school staff in the administering of medication during school hours. On occasion children would come home without having had their lunch time tablet. This occurred in some instances because the teacher/s did not believe the child required medication, they were against the use of stimulant medication, or they believed the child to be capable of taking the medication unsupervised. A number of children had organised to have their medication administered at the school's office. These children were let out of class at the appropriate time take there lunchtime dose.

Question 31

i. Is your child(ren) with ADHD attending school?

YES 18 (86%)

NO 3 (14%)

ii. If yes, what type of school do they attend?

PRIVATE -

PUBLIC 16 (88%)

CATHOLIC 2 (12%)

DISTANCE SCHOOLING -

If no, does your child(ren) attend any form of childcare?

YES 4 (44%)

NO 5 (55%)

Question 32

Did you face any problems with enrolling your child(ren) in school or childcare because of her/his ADHD?

YES 3 (19%)

NO 17 (81%)

Question 33

What was your child's behaviour like at school before diagnosis and treatment?

Some of the participant's children were diagnosed and treated before they reached school age. However, the behaviour of these children at school was still noted to be less satisfactory if they had forgotten to take their lunch time tablets.

Question 34

Has your child been assessed for her/his condition by the school?

YES 4 (22%)

NO 14 (78%)

Question 35

Do the people at your child's school/childcare have an understanding of ADHD?

YES 9 (45%)

NO 9 (45%)

[SOME 2 (10%)]

Question 36

Are you happy with the role the school plays in the management of your child?

ALWAYS -

MOST OF THE TIME 11 (61%)

SOMETIMES 6 (33%)

NEVER 1 (5.5%)

As a whole the parents were sympathetic to the difficulties teachers face. They commented on the fact that it was very hard for teachers to give as much attention as an ADHD child needs when they have 28 other children whom which they have to consider. It was recognised that there is not enough resources and funding to help teachers cope with children with challenging behaviours.

Question 37

Does your child/children with ADHD have any learning difficulties or any additional diagnosis?

YES 50%

NO 50%

Learning Difficulties and additional diagnoses included:

ODD 30%

CD 10%

Reading 30%

Spelling 20%

Epilepsy 5%

Autism 10%

Question 38

Do you have regular contact with the school about your child's progress?

YES 18 (90%)

NO 2 (10%)

How often?

DAILY 4 (22%)

WEEKLY 6 (33%)

FORTHNIGHTLY 4 (22%)

TWICE A YEAR 1 (5.5%)

WHEN REQUIRED 3 (16%)

Question 39

Does your child's teacher have regular contact with a paediatrician or GP to discuss her/his progress?

YES 2 (11%)

NO 16 (89%)

How often?

THREE MONTHLY 1

PAEDIATRICIAN SENDS REPORTS TO TEACHER 1

Question 40

What strategies has the school/teacher used to help manage your child/children's behaviour?

Many parents said that their child's teacher used firm but flexible management for their child. The use of time-out when the child was overexcited or misbehaving, in frequent and short bursts was also popular. Seating the child alone close to the black board and teacher, away from disruptive influences was also a strategy used by a lot of teachers. A relaxed classroom environment and teachers aides were also mentioned.

Have these been successful?

YES 14 (77%)

NO 4 (23%)

Question 41

Has your child's behaviour improved at school since diagnosis and medication?

YES 17 (94%)

NO 1 (6%)

Question 42

Has your child's behaviour improved at home?

YES 18 (86%)

NO 3 (14%)

Question 43

Does your child have a good relationship with;

i. classmates/friends

YES 11 (61%)

NO 7 (39%)

ii. siblings?

YES 13 (68%)

NO 6 (32%)

7. DISCUSSION

7.1 Introduction

This chapter analyses the results of the parent questionnaire and of the research presented in this study. The outcomes of the questionnaire in conjunction with the research compiled addresses the main aims of the project which were to determine the role of the school in the management of children with ADHD and the effect that children with this disorder can have on the family.

The first section of this chapter discusses the schools' role in the management of ADHD children. This topic is discussed both from the perspective of the parents and from the perspective of the school system. The parent's perspective was obtained from those whom answered the questionnaire and those interviewed. The school systems view was gained from the research presented in chapter four of this study and from correspondence with professionals within the education department. This section fulfils the first aim of the project, which was to determine the role of the school in the assessment and management of children with ADHD.

Section two of this chapter discusses the effects that a child with ADHD can have on the family. This information under discussion in this section was drawn from the parent questionnaires and research presented in chapter five. This addresses the second aim of the project, which was to determine the effects on the family of a child with this behavioural disorder.

The results of this study discussed in this chapter highlight the need for a more positive approach to the management of children with behavioural disorders within the school system. It also identifies the need for educational policies that address the specific needs of children with disorders like ADHD. This study recognises there have been many positive developments regarding the management of these students within the education department but without adequate resources, teachers and schools will be unable to provide these children with the special attention that they need to succeed at school.

The results of this study have also identified that the effects that ADHD children can have on the family situation have been largely underestimated. The more wide reaching long-term social effects that this disorder can have have also been neglected in the past. The lack of interest in this aspect of ADHD is highlighted by the limited literature available on the subject.

7.2 The Role of the School

A child's school years are integral in the development of academic and social skills in children of all abilities. These years are especially important for children with behavioural disorders such as ADHD. The development of these essential skills enables these children to acquire essential skills to progress into a successful adolescent and adult life.

The behaviours accompanied by ADHD contrast sharply what is expected at school. Successful academic achievement requires the ability to concentrate, stay on task, and follow instructions. This is why the school environment can seem like a totally foreign place for a child with ADHD. One parent actually commented that she felt sending her child with ADHD to school was like "sending him to school underwater."

Having said this, with appropriate interventions, the school can be a positive environment and play a beneficial role in the management of children with ADHD and other behavioural disorders.

In this section the role of the school as it is seen from the perspective of the parents of ADHD children will be discussed. It will also include discussion on the role of the school from the point of view of the teacher, school and school system.

The requirements of an ADHD child in the school environment, like any child, involve more than just the appropriate academic instruction. Children with ADHD have a number of needs that may extend beyond what many teachers or schools believe is "beyond the call of duty".

The parent questionnaire addressed a number of issues that concerned the school's role in the management of children with ADHD. These included; medication, enrolment, assessment, understanding of the disorder, strategies used by the school and contact between teachers and parents and teachers and health professionals.

7.2.1 Medication Issues

Stimulant medication has been used for the treatment of children with ADHD for over half a century. The safety and efficacy of these preparations have been studied extensively and are well proven. However there are still those who believe that they are unsafe and their use controversial. It would appear that this attitude is still present amongst professionals within the school system.

Thirty-seven percent of participants in the questionnaire whose children were attending school said that they had experienced problems with their children being given medication at school. The main problem indicated by parents was the lack of supervision in the administration of medication during school hours.

This occurred for a number of reasons. In some instances teachers refused to be involved in the medication process as they did not believe the child required medication. In others, they believed the children old enough and capable enough to remember to take the medication themselves. There were also some teachers who were opposed to the use of stimulant medication and were concerned of the long-term effects of its use.

These opinions indicate firstly a general lack of understanding of the disorder. They also indicate ignorance amongst educators concerning the efficacy and safety of stimulant medication.

If the true nature of ADHD was understood by teachers they would realise that self-medication by students with the disorder, especially younger students, is unreasonable. Children with this disorder suffer from poor short-term memory and organisational skills. Thus for many children with ADHD, remembering to take their own medication is beyond their capabilities.

There are a number of things that can be done by the parents to increase compliance in their children e.g. taping the tablet to the lid of the lunch box, reminder notes. However, a side effect of the medication can be appetite suppression. Thus a child with ADHD may not even eat their lunch. Also, the time at which the child is meant to take their lunchtime dose is when the dose from the morning will be wearing off so they will be even less capable of remembering to take their medication.

As the child is within the care of the school during the time at which medication needs to be administered, it is not unreasonable to expect someone within the school to be involved with this process for those children who need it. A student with disorders such as Diabetes or Asthma would not be denied this assistance. Perhaps if ADHD had the same recognition as diabetes and asthma as a "real" disorder then teachers would not be so reluctant to supervise ADHD children with their medication.

Children who are required to take prescription medication during school hours are required to fill out a medication form. This form is part of the Education Departments Health Care Requirement Folder. This does not appear to be enforced in all schools. However, this could be due to parents choosing not to inform the school of their child's condition or the fact that they require medication during school hours.

From the parent questionnaire and research compiled for the purposes of this study it would appear that the issue of medication within the school environment requires further attention. For a start the awareness and acceptance of ADHD as a "real" disorder must be raised within the educational community. In particular, the safety and efficacy of stimulant medication needs to be highlighted. Secondly, specific guidelines concerning the administration and supervision of medication during school hours need to be reviewed so that every child can be assured appropriate interventions are undertaken if it is so required.

7.2.2 Access to Education

It has been reported that children with ADHD and other behavioural disorders have been denied access to education and childcare in some instances. This practice denies

these children's basic right to an education. Nineteen percent of the respondents in the questionnaire reported having problems with enrolling their child in school or childcare. Only a minority of these children were denied access however. The reason for these children being denied enrolment is often cited as a lack of resources.

There is indeed a lack of resources and help for schoolteachers in attending to the needs of these children. However, improvements in resources and funding available to schools and the individual teacher are a slow process. In the meantime, those schools and teachers with ADHD students are struggling to accommodate the needs of these students often, to the disadvantage of other students in the class.

While, the increases in resources and funding can only come from a government level, there are things that can be done within the schools themselves to improve the situation. This can include adopting a different teaching style that will suit these children. Also important is maintaining good communication between the teacher and the parent. This will enable the discussion of successful behavioural management strategies both at home and in the school setting. Thus ensuring the consistent management of the child's behaviour across the board, and a greater chance of academic success.

7.2.3 Assessment of ADHD at School

A child of school age spends well over a third of their time at school. This makes the school an ideal setting in which to observe an assess a child's academic, behavioral and social functioning.

Ideally, each child believed to have ADHD should be given a standard intelligence test, followed by specialised assessments in reading, writing, maths and language. Unfortunately in reality, due to the lack of resources, this does not always occur.

Within the Government schools, there are trained psychologists employed as Guidance Officers to perform such testing. The information obtained from such tests is often very helpful to the paediatrician when making a diagnosis. This again

highlights the importance of a collaborative team approach to the assessment and management of ADHD.

The questionnaire found that an educational psychologist or guidance officer within the school setting had assessed twenty-two percent of those attending school. However not all of these assessments had been in relation to the child's ADHD. This is a disappointing number. It would appear that children are not being identified as potential ADHD sufferers and thus are not being assessed and potentially treated for the disorder within the school setting. This small number of children assessed may also be a result of insufficient numbers of people trained to perform these assessments.

7.2.4 Understanding of ADHD

As previously discussed in this section, it would appear that the understanding of ADHD within the school system is very limited. This is evidenced by the attitudes towards medication discussed in section 7.2.1.

Contrary to the problems that parents reported having with medication and the school, it would seem that they believe teachers to have at least some understanding of the disorder. Forty-five percent of participants in the questionnaire believed people at their child's school had an understanding of ADHD. This was the same number that believed that people at their child's school did not have an understanding of the disorder. Ten percent of parents said that "some" people had an understanding.

Some parents reported that the principal and teachers of their child's school had attended seminars on challenging behaviours. Others had arranged meetings with the child's paediatrician. While this is promising news, such meetings and training sessions need to be more than a one off occurrence. However, it is a step in the right direction. If more schools could endevour to increase their knowledge of the disorder it would be of great benefit to the child, teacher and the school as a whole.

7.2.5 Behavioural Strategies

There are a number of strategies for the behavioural management of children with ADHD that can be trialed within the school setting. These strategies discussed in

chapter four can in conjunction with medication have a dramatic effect on the ADHD child's behaviour in the classroom setting. Behavioural modification can also have a mild effect on children who are not medicated.

Firm but flexible management was reported as an effective strategy used by some teachers. Another very popular strategy employed by a number of teachers was the use of Time-Out. This involves the removal of the child from the classroom or from the situation in which they are misbehaving. It can also be used when the child is having trouble staying on task. If they are given frequent, short bursts of time-out this will diffuse a potential situation before it arises.

It was also common practice by teachers to seat the ADHD at the front of the classroom, close to the blackboard and teacher, away from any disruptive influences. Over all, seventy-seven percent of parents said that the strategies teachers had put in place had been successful. These are pleasing results. The ADHD child, his peers, family and teacher would all serve to benefit if all teachers in all schools could implement similar strategies.

7.2.6 Contact between the home and school settings

Maintaining regular contact between the home and school settings is essential. It allows for the discussion of behavioural management strategies used within the classroom and in the home so that parents and teachers can design a consistent collaborative approach to the ADHD child.

Ninety percent of parents said that they had regular contact with the school on their child's progress. Twenty-two percent of these parents said that they saw the school daily, thirty-three percent saw the school weekly, twenty-two percent fortnightly, and only five and a half percent and sixteen percent, twice a year and when required respectively.

It would seem that the majority of parents with ADHD children are having regular contact with their child's teacher. What was not ascertained from the questionnaire however, was what was discussed in these meetings. It is important that teachers and

parents make any correspondence positive as they can. This does not mean that any bad behaviours the child has displayed should be ignored. However, an effort should be made to highlight any positive achievements the child has made instead of dwelling on the bad.

As a whole, of the 86% of the participants in the parent questionnaire whose ADHD children were attending school, most of them admitted to being happy with the role of the school "most of the time". 61% said they were happy with the school "most of the time". None of the participants said they were happy with the role of the school "all of the time" and only one parent said they were "never" happy with the role the school played in the management of their child. It should be noted that this particular child had co-existing ODD.

Parents were generally sympathetic to the difficulty teacher's face. Many commented that it was hard for a teacher to accommodate the needs of ADHD children in a class of twenty-five or more students whose needs they also have to consider. While there were some parents who complained that the teachers were insensitive and unco-operative when it came to their child's needs. The main bain of contention amongst parents was the lack of resources and funding available to help teachers cope with children with challenging behaviours such as ADHD.

In the defense of the education system, developments have been made in recent years. The introduction of he inclusion policy illustrates the departments' acceptance of children with special needs, even if children with ADHD are not officially considered as children with "special needs".

However, it has been raised amongst teachers, that there are problems with inclusion that need addressing. For the inclusion of children with special needs into the average classroom it is essential that adequate support be offered in resources and human services. The types of problems that teachers cite about inclusion were identified in chapter four. These included insufficient human resources, insufficient time allowance, inadequate classroom environment, and inadequate training and professional development.

These issues extend to include the ADHD child. While they are not considered as children with "special needs", they do require extra attention and special management. Teachers can not possibly be expected to adequately develop these student's academic and social skills, without the adequate training and resources. Teachers need to be able to have the opportunity to undertake training courses explaining exactly what the disorder is, methods of discipline, teaching styles that suit these children and the importance of developing the child's self-esteem.

In order for the education of students with behavioural disorders such as ADHD to improve teachers need to become more aware of this common disorder. Teachers need to have access to training courses and resources specific to ADHD and other behavioral disorders. More support and help for the classroom teacher and families are also essential. While there are things that can be done by the individual teacher and school concerned, these advancements are ultimately the responsibility of the Commonwealth and state government.

7.3 The Effect on the Family

The impact that children with ADHD can have on their parents and siblings is enormous. However little attention has been paid to this important aspect of the disorder. Less than 3% of the 1100 articles published on ADHD since 1990[46] have addressed this issue. If these issues are not addressed the effects of the disorder can permeate to effect communities and society as a whole.

This section of the chapter discusses the effect of ADHD children on the family from the perspective of family members of children with ADHD. It also addresses the ways in which these families deal with the disruption of having a child with the disorder.

The parent questionnaire compiled for the purposes of this study addressed a number of issues relating to the effects of ADHD children on the family unit and the way in

[46] Jureidini, J., "Some reasons for concern about ADHD." *J. Paediatric and Child Health*, 32, 201-203.

which the family managed these effects. These included the issues of; support groups, effects on siblings, relationships, and management strategies.

7.3.1 Support Groups

Fortunately, for the families of today, support groups for those effected by ADHD are increasingly being formed. These groups do invaluable work both in supporting families, providing information, and motivating change within the community.

Support groups give parents of ADHD children the opportunity to meet other families in the same situation as themselves. One thing ADHD parents may have in common is social isolation. Friends and family can often fall by the way side. They may not understand the problems of an ADHD child and blame the problem on the parents. Or the parents of ADHD children may become so distracted with their own problems that they lose contact with their friends.

80% of those who answered the questionnaire said that they regularly attended a support group. As the majority of the questionnaires were distributed at support group meetings this result probably does not accurately depict the actual proportion of parents or family members of ADHD children who attend support groups. The majority of respondents attended a support group weekly (50%) or fortnightly (37.5%). Another 12.5% attended monthly.

There are a number of support groups available to those affected by ADHD and other challenging behaviours within the Hobart area. However it would appear that there presence are not sufficiently advertised. While most who answered the questionnaire said they had become aware of support groups via health professionals or friends, some commented that they had had great difficulty in finding a support group. This highlights the need for more community awareness about the existence of such support groups and how they can be accessed.

7.3.1.1 Benefits of Support Groups

Parents and family members of ADHD children can gain great benefit from support groups. This can come through understanding what they are going through and also through access to resources and training seminars.

Of the parents who attended support groups most said the greatest benefit they got from attending a support group was the feeling that they were "not alone", that there were others going through the same things as themselves. Many parents reported that friends and family had been unsympathetic and skeptical of their child's condition. At least within the confines of the support group they were able to feel accepted.

The support group is also used as a means of releasing stress. This comes through openly talking about their problems and "having a shoulder to cry on" or "having a laugh." These groups allow parents to vent their feelings regularly with other parents that are experiencing the same feelings. By letting off steam in these meetings parents and carers of ADHD children are able to regain their perspective.

These groups are also a great source of knowledge about the disorder. In addition to having guest speaker meetings, other parents are only too willing to share the latest book they have read, or any other helpful information they have received from their doctor or elsewhere. Most groups also have resources to loan, such as videotapes, books and other educational material.

7.3.2 Areas of life affected

Any child will have an impact on the lives of it's parents, and sacrifices and comprises will have to made until the child becomes an independent adult. When the child has ADHD these sacrifices and compromises can be even greater.

In this section the ways in which parents lives have been affected as a result of having an ADHD child is discussed. All participants in the questionnaire reported that at least one aspect of their lives had been affected because of their child's condition.

The areas of life that most parents reported as being effected were leisure time (75%), friendships (70%), and health (60%). Other areas that were also affected were; financial situation (50%), marriage and partnerships (45%) and work (35%).

7.3.2.1 Leisure Time

Parents of ADHD children have very little time for themselves and their own personal needs. Personal leisure time can be non-existent. As no one is willing to mind their child with ADHD they have to be with them at all times. "I have no space to myself from the minute I wake". Loneliness is also encountered. With very few people who are understanding of their situation, parents and carers of ADHD children can feel quite alone.

7.3.2.2 Friendships and Relationships

Of the married people who answered the questionnaire, almost all commented that having an ADHD child had an impact on their marriage. They had less time to spend with their partners and found that they argued more. Those who were not married also said that that personal relationships were affected.

Intimate relationships were not the only ones to suffer. Most participants reported that they had lot friend or see them less as they are unable to take their children to their friend's homes. One participant said: "some friends have stopped visiting because I can't just sit down and chat."

7.3.2.3 Work

Many of the respondents of this questionnaire said they were unable to return to work or continue working as they were unable to find anyone willing to mind their children. Childcare agencies were either reluctant to take the child or family members were unwilling. "I can't work due to the lack of childcare available to children with ADHD."

7.3.3 The effects on siblings

The other children in a family with an ADHD child will be affected by the stress generated within the family. They may also suffer from a lack of attention because so much of their parent's time and concern is taking up by worrying about the child with ADHD. Thee needs of the siblings of children with this disorder may sometimes be unmet.

The siblings of ADHD children often bare the brunt of their parent's frustrations. Their parents rely on these children to be well behaved. But the simple fact is that no child, ADHD or not, is good 100% of the time and the non ADHD children in the family can be damaged greatly by having to assume the "good" role all the time.

Many siblings of ADHD children can, in later life, develop co-dependant personalities similar to those seen in the children of alcoholic mothers or fathers. A child with an alcoholic parent will often learn coping mechanisms, such as not asserting themselves, keeping quiet when their parent is angry and not speaking out.

Siblings of ADHD children can suffer similar problems because ADHD children dominate family's time, resources and emotions, through their demands and aggression. "siblings can develop a type of co-dependant personality. Their ability to deal with difficult relationships, aggressive bosses, abusive people and other similar problems is poorly developed." [47]

69% of parents with other children admitted to spending more time attending to the needs of their ADHD child than their non-affected child or children. 50% of respondents said this meant that the needs of their non-affected children were "sometimes" unmet. 31% said their needs were "often" unmet and 12.5 % said "always". Only one respondent said that their other children's needs were never unmet.

[47] Wallace, I., You and Your ADD Child, Harper-Collins Publishers, 1997, pg. 66.

Siblings of ADHD children also often feel that they are unfairly punished for any misbehaviour in comparison to the ADHD child and phrases like "You always let John get away with more than me" are commonly heard. It is hard for the siblings of children with this disorder to understand that their brother or sister will not respond to the same punishments and reprimands that their parents use on themselves.

This emphasises the importance of communication between the unaffected children and parents to explain that they do not love their ADHD child anymore than them but they need special help to be good. It is important that parents do not dismiss the feelings of siblings. They need to be listened to, and discuss their emotions just as much as the ADHD child. If not, they too will become casualties of the disorder.

7.3.3 Management Strategies

It is essential that the needs and concerns of the parents and carers of ADHD children be addressed. To be effective parents for their ADHD child parents need to first be able to manage their own stresses. Parents need help in coping with their own feelings and those of their other children as well as their ADHD child.

In the parent questionnaire distributed participants were asked how they manage any problems that they have as a result of their child's disorder. Attending a support group and talking to friends rated highly as a method of stress management.

Participants also listed exercise as a good form of management to use. Both walking and aerobics were forms of exercise popular amongst the participants of the questionnaire.

Unfortunately, a few responded that they were doing nothing yet to mange their stress or depression. Comments like " I just get on with it, and look to the future" and " I just deal with it, it is my problem, no one else's."

Quite a few of the women who answered the questionnaire had been prescribed anti-depressants to help them cope. One woman had even been hospitalised for depression. These findings indicate that parents of ADHD are not developing

adequate coping mechanisms and are developing their own morbidity. This highlights the need for intervention in the form of parent counselling and management strategy development.

An increase in awareness and acceptance of the disorder within the community would also benefit parents of ADHD children. If the disorder was given more credibility and publicity parents of ADHD children would be able to enjoy the same understanding and support that parents of children with Diabetes or Asthma do.

7.3.5 Respite Care

The demands of an ADHD child are extreme. It is important that measures are undertaken so that parents can share the load. It is also important for parents to be able to escape from the situation occasionally so they are better able to deal with the problem on a day to day basis. As much as the families of ADHD children may love them, they are only human and need time to themselves to fulfil their own personal needs every once and a while.

This is where supportive family and friends can be very helpful. If parents are able to rely on family or friends to mind their child when they need some "time-out" of their own both the parent and child will benefit. However, parents of ADHD children often have no one who is willing to mind their child. This highlights the importance of respite services for the parents and family members of children with ADHD.

In the Hobart area at least, there are two forms of respite care available for the parents and carers of children with special needs. One form of respite is Family Based Care. This involves either "in-house care" which is where the carer minds the child within the child's own home, or "host family care" where the child is taken into the carer's home. Respite is also available on site at Quindalup.

Respite is given where it is deemed that there is a genuine need. This is assessed on an individual basis. These services are limited however, and children with intellectual handicaps and severe physical disabilities are considered first.

There were some parents who answered the questionnaire who had been able to access respite services. These parents reported that this was a fantastic as a form of managing their personal problems and enabled them to enjoy their children more and be better and more effective parents.

There is a great need for appropriate, accessible, and affordable respite care. Like the issue of educational resources for ADHD children however, this is largely in the hands of governmental bodies. All ADHD parents can do is continue to raise awareness of the disorder and lobby for change.

7.4 Conclusion

The discussion in this chapter has identified both the successes and shortcomings of the role of the school in the assessment and management of children with ADHD. It has also described the ways in which a child with this disorder can effect the family. The need for further consideration and study in both these areas is evident and this will be discussed in the following chapter that presents the conclusions of the study.

8. CONCLUSIONS

8.1 Introduction

The aims of this study were firstly, to define the role of the school in the assessment and management of children with ADHD and secondly, to determine the effects those children with this disorder can have on the family.

These aims were fulfilled within chapters three and four respectively and from the results of the questionnaire, which are outlined and discussed within chapters six and seven of this study.

From both the research undertaken and the questionnaire compiled for the purposes of this study it was evident that there is a need for further consideration and advancements in all levels of the community, concerning all aspects of the disorder.

Most importantly the study highlighted the need for improvement in the educational strategies used and the resources available for students with ADHD. As important was the recognition of the effects that children with this disorder can have on the family and the need for more support and understanding to combat these effects.

8.1 Educational Issues

In this study it was realised that while awareness and acceptance of ADHD is increasing within the community, as a whole further developments need to occur within the education system. This will ensure that the school is able to play the most beneficial role it can in the management of children with this disorder.

Interventions that will enable this to occur include firstly the allocation of more resources and funding from both state and federal levels. This will accommodate the need for early intervention schemes and assessments, more support staff, professional development, and training courses in the management of children with ADHD and other challenging behaviours.

If such interventions are undertaken, this will lead to a greater number of ADHD children that go on to lead successful and happy adult lives.

8.2 The Effect on the Family

The limited amount of literature that was available on the effect of the family for discussion in this project highlighted the need for further study in this area. There is a great need to attend to the emotional issues and psychosocial pressures that impact on the lives of families with ADHD children.

If these aspects of the disorder are more thoroughly addressed and interventions made to reduce the negative effects that ADHD children can have within the family then families will be more equipped to appropriately manage any adverse repercussions of the disorder. This will help to ensure that the social outcomes of this disorder are positive rather than negative.

Appropriate management of children with ADHD within the school and home settings as discussed will do more than improve the lives of the child with the disorder and his family. The whole community and society in general stands to benefit from diminishing the detrimental outcomes of this common childhood disorder.

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10.1 Parent and Family Member Questionnaire

QUESTIONNAIRE FOR FAMILY MEMBERS OF CHILDREN WITH ADHD:

(Please tick the appropriate boxes and answer questions in the spaces provided)

(1) Name of parent/family member:

.....

(2) Your age:

[ ] years

(3) Your occupation:

.....

(4) Relationship to child/children with ADHD:

[ ] mother [ ] father [ ] guardian [ ] other .....

(5) Marital status:

[ ] married [ ] single [ ] defacto [ ] divorced

(6) Occupation of spouse/partner:

.....

(7) How many children do you have?

.....

(8) Age of child/children with ADHD:

1. [ ] years
2. [ ] years

(9) Sex of child/children with ADHD: 1. [ ] male [ ] female

2. [ ] male [ ] female

(10) At what age was the diagnosis made?

1. [ ] years
2. [ ] years

(11) At what age did you first notice any symptoms in your child/children?

1. [ ] years
2. [ ] years

(12) Were your child/children's clinical symptoms more characteristic of ADD or ADHD?

[ ] ADD (non-hyperactive)

[ ] ADHD (hyperactive)

Please give a brief account of the problems your child/children has/have:

.....

.....

.....

.....

.....

.....

(13) Is there a history of ADHD in your family?

[ ] yes [ ] no

If yes, please give details;

.....

.....

.....

(14) How is your child managed?

[ ] medication [ ] behavioral [ ] speech therapy [ ] occupational therapy

[ ] special education support [ ] parent counseling [ ] other .....

(15) What do you think are the most effective form/s of management for your child?

.....

.....

.....

(16) Number in order from 1-10, from the most helpful to the least helpful, those who have been the most helpful in the management of your child's ADHD?

[ ] family [ ] General Practitioner [ ] Social Worker [ ] friends

[ ] paediatrician [ ] psychologist [ ] psychiatrist [ ] support groups

[ ] teacher [ ] others .....

(17) Do you attend a support group?

[ ] yes

[ ] no

(18) If yes, how did you find out about the support group?

.....

.....

(19) How often do you attend the support group?

[ ] weekly [ ] monthly [ ] when a problem arises [ ] other .....

(20) What benefits do you get from the support group?

.....

.....

.....

(21) Apart from the support group, who else do you get emotional support from?

[ ] partner [ ] family [ ] friends [ ] GP

[ ] paediatrician [ ] psychologist [ ] social worker

[ ] others .....

[ ] others .....

(22) If you have other children without ADHD;
Do you spend less or more time with your ADHD child/children compared with your non-affected children?

[ ] less [ ] more

If more, please give details;

.....

.....

.....

(23) Do you feel that the needs of your non affected child(ren) are unmet because of the time you spend with your ADHD child/children?

[ ] always [ ] often [ ] sometimes [ ] never

If they have been affected, please give details;

.....

.....

(24) Do you feel your own personal needs are unmet because of having an ADHD child/children?

[ ] yes [ ] no

If yes, what areas of your life have been affected because of your child/children's condition?

[ ] marriage/partnership [ ] friendships [ ] work [ ] health

[ ] leisure time [ ] financial situation [ ] none

[ ] other .....

In what way(s) has your life been changed?

.....

.....

(25) As a consequence of having an ADHD child/children do you ever;

i. feel stressed?

[ ] always [ ] often [ ] sometimes [ ] never

ii. feel depressed?

[ ] always [ ] often [ ] sometimes [ ] never

iii. feel like you are unable to cope?

[ ] always [ ] often [ ] sometimes [ ] never

(26) If you have been affected, by one or more of these ways, what have you done to manage these problems?

.....

.....

.....

(27) Is your child on medication for ADHD?

[ ] yes [ ] no

(28) If yes, what medication(s) does s/he take for ADHD?

.....

.....

(29) I. Has s/he taken any other medication in the past for ADHD?

[ ] yes [ ] no

ii. If yes, what medication was that?

.....

.....

(30) Have there been any problems with your child being given medication at school or child care?

[ ] yes [ ] no

If yes, please give details;

.....

.....

.....

(31) I. Is your child/children with ADHD attending school?

[ ] yes [ ] no

ii. If yes, what type of school do they attend?

[ ] private [ ] public [ ] Catholic [ ] distance schooling

iii. If no, does your child/ children attend any form of childcare?

[ ] yes [ ] no

(32) Did you face any problems with enrolling your child/children in school or childcare because of her/his ADHD?

.....

.....

.....

(33) What was your child's behaviour like at school before diagnosis and treatment?

.....

.....

.....

(34) Has your child been assessed for his/her condition by the school?
(eg. by guidance officer, psychologist etc.)

[ ] yes [ ] no

If yes, please give details;

.....

.....

(35) Do the people at your child's school/childcare have an understanding of ADHD?

[ ] yes [ ] no

Please give details, whether you answered no or yes;

.....

.....

.....

(36) Are you happy with the role the school plays in the management of your child?

[ ] always [ ] most of the time [ ] sometimes [ ] never

If there have been any problems please give details;

.....

.....

.....

(37) Does your child/children with ADHD have any learning difficulties or any additional diagnosis?

.....

.....

(38) Do you have regular contact with the school about your child's progress?

[ ] yes [ ] no

If yes, how often?

.....

.....

(39) Does your child/children's teacher have regular contact with a paediatrician or general practitioner to discuss his/her progress?

[ ] yes [ ] no

If yes, how often would you estimate this to be?

.....

.....

(40)i. What strategies has the school/teacher used to help manage your child/children's behaviour?

.....

.....

.....

ii. Have these strategies been successful?

[ ] yes [ ] no

(41) Has your child's behaviour improved at school since diagnosis and medication?

[ ] yes [ ] no

Please give details, whether you answered yes or no;

.....

.....

.....

(42) Has your child's behaviour improved at home since diagnosis and medication?

[ ] yes [ ] no

Please give details, whether you answered yes or no;

.....

.....

(43) Does your child have a good relationship with;

I. his/her classmates/friends? [ ] yes [ ] no
ii. his/her siblings? [ ] yes [ ] no

If no, please give details;

.....

.....

(44) Do you have anything else you would like to add?

.....

.....

.....

.....

.....

.....

THANKYOU FOR YOUR TIME AND COOPERATION.

10.2 Diagnostic Criteria for Attention-Deficit/Hyperactivity Disorder

A. Either (1) or (2):

(1) 6 or more of the following symptoms of INATTENTION have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

INATTENTION

(2) six or more of the following symptoms of HYPERACTIVITY/IMPULSITIVITY have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before the age of seven

C. Some impairment from the symptoms is present in 2 or more settings (e.g. at school (or work) and at home.

D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.

E. The symptoms do not occur exclusively during the course of a PDD, Schizophrenia, or other psychotic disorder and are not accounted for by another mental disorder (e.g. Mood disorder, Anxiety disorder, Dissociative disorder, or a personality disorder)

Attention-Deficit/Hyperactivity Disorder, Combined Type:

If both Criteria A1 and A2 are met for the past 6 months

Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type:

If criterion A1 is met but criterion A2 is not met for the past 6 months

Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type:

If criterion A2 is met but criterion A1 is not met for the past 6 months

10.3 Diagnostic Criteria for Oppositional Defiant Disorder (ODD)

(DSMIV 1994)

A. A pattern of negativistic, hostile and defiant behaviour lasting at least 6 months, during which four (or more) of the following are present:

(1) often loses temper

(2) often argues with adults

(3) often actively defies or refuses to comply with adults' requests or rules

(4) often deliberately annoys people

(5) often blames others for his or her mistakes or misbehaviour

(6) is often touchy or easily annoyed by others

(7) is often angry and resentful

(8) is often spiteful or vindictive

Note: Consider a criterion to be met only if the behaviour occurs more frequently than is typically observed in individuals of comparable age and developmental level.

B. The disturbance in behaviour causes clinically significant impairment in social, academic or occupational functioning.

C. The behaviours do not occur exclusively during the course of a Psychotic or Mood Disorder.

D. Criteria are not met for Conduct Disorder, and, if the individual is 18 years or older, criteria are not met for Antisocial Personality Disorder.

10.3 Diagnostic Criteria for Conduct Disorder (DSM-IV)

A. A respective and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of three (or more) of the following criteria in the past 12 months, with at least one criterion present in the past 6 months:

Aggression to people and animals:

(1) often bullies, threatens or intimidates others

(2) often initiates physical fights

(3) has used a weapon that can cause serious physical harm to others (e.g., a bat, brick, broken bottle, knife, gun)

(4) has been physically cruel to people

(5) has been physically cruel to animals

(6) has stolen confronting a victim (e.g., mugging, purse snatching, extortion, armed robbery)

(7) has forced someone into sexual activity

Destruction of property:

(8) has deliberately engaged in fire setting with the intention of causing serious damage

(9) has deliberately destroyed others' property (other than by fire setting)

Deceitfulness or theft

(10) has broken into someone else's house, building or car

(11) often lies to obtain goods or favours to avoid obligations (i.e., 'cons' others)

(12) has stolen items of nontrivial value without confronting a victim (e.g., shoplifting, but without breaking and entering; forgery)

Serious violations of the rules

(13) often stays out at night despite parental prohibitions, beginning before the age of 13 years

(14) has run away from home overnight at least twice while living in parental or parental surrogate home (or once without returning for a lengthy period)

(15) often truant from school, beginning before age 13 years

B. The disturbance in the behaviour causes clinically significant impairment in social, academic or occupational functioning.

C. If the individual is age 18 years or older, criteria are not met for Antisocial Personality Disorder.

10.4 ADHD Support Groups and Services

ADDSUP (TAS) Inc.
P.O.BOX 514
Ulverstone
7315

The Parenting Centre
232 New Town Rd
New Town, Tasmania
7008

OPTIONS
Parent/Teenager Counselling
3rd Floor
29 Elizabeth Mall
Hobart, Tasmania
7000

Centacare Family Services
23 Stoke St.,
New Town, 7008

ABA-Kidz
Cassie Le Fevre 0411032807
Nicole Kingston 0418316754

RESPITE SERVICES

Family-based Care
1 Bowen Rd
Moonah 7009

Quindalup
c/o 4 Farley St.,
Glenorchy

SUPPORT GROUPS (Hobart)

Northern Group:
Gagebrook Community House
Lamprill Circle, Gagebrook
2nd & 4th Tues in month
9.30 am-11.30 am
Contact:
Michelle Swallow
Bridgewater Community Health Centre
Ph: 62637309
or

Eastern Shore:
Clarendon Vale
Neighbourhood Centre
63 Mockridge Rd
Wednesdays
9.15 am-11.15 am
Contact:
Gail Evans
Ph: 62478163

Wendy Stott

Gagebrook Family Support

Ph: 62635464

Midway Point Group

Midway Point Family

Support

Hoffman St.,

Midway Point, 7171

Contact:

Lanna Evans

Ph: 62651926

Kingston Group

Maranoa Heights Family

Support

Hawthorne Drive, Kingston

Contact:

Cheryl Davis

pH: 62294602

10.5 Conner's Parent-Teacher Questionnaire

Parent's Questionniare

Name of Child _____ Date _____

Please answer all questions. Beside *each* item below, indicate the degree of the problem by a check mark (✓)

	Not at all	Just a little	Pretty much	Very much
1. Picks at things (nails, fingers, hair, clothing).				
2. Sassy to grown-ups.				
3. Problems with making or keeping friends.				
4. Excitable, Impulsive.				
5. Wants to run things.				
6. Sucks or chews (thumb; clothing; blankets).				
7. Cries easily or often.				
8. Carries a chip on his shoulder.				
9. Daydreams.				
10. Difficulty in learning.				
11. Restless in the "squirmy" sense.				
12. Fearful (of new situations; new people or places; going to school).				
13. Restless, always up and on the go.				
14. Destructive.				
15. Tells lies or stories that aren't true.				
16. Shy.				
17. Gets into more trouble than others same age.				
18. Speaks differently from others same age (baby talk; stuttering; hard to understand).				
19. Denies mistakes or blames others.				
20. Quarrelsome.				
21. Pouts and sulks.				
22. Steals.				
23. Disobedient or obeys but resentfully.				
24. Worries more than others (about being alone; illness or death).				
25. Fails to finish things.				
26. Feelings easily hurt.				
27. Bullies others.				
28. Unable to stop a repetitive activity.				
29. Cruel.				
30. Childish or immature (wants help he shouldn't need; clings; needs constant reassurance).				
31. Distractibility or attention span a problem.				
32. Headeches.				
33. Mood changes quickly and drastically.				
34. Doesn't like or doesn't follow rules or restrictions.				
35. Fights constantly.				
36. Doesn't get along well with brothers or sisters.				
37. Easily frustrated in efforts.				
38. Disturbs other children.				
39. Basically an unhappy child.				
40. Problems with eating (poor appetite; up between bites).				
41. Stomach aches.				
42. Problems with sleep (can't fall asleep; up too early; up in the night).				
43. Other aches and pains.				
44. Vomiting or nausea.				
45. Feels cheated in family circle.				
46. Boasts and brags.				
47. Lets self be pushed around.				
48. Bowel problems (frequently loose; irregular habits; constipation).				

Teacher's Questionnaire

Name of Child _____ Grade _____

Date of Evaluation _____

Please answer all questions. Beside *each* item, indicate the degree of the problem by a check mark (✓)

	Not at all	Just a little	Pretty much	Very much
1. Restless in the "squirmy" sense.				
2. Makes inappropriate noises when he shouldn't.				
3. Demands must be met immediately.				
4. Acts "smart" (impudent or sassy).				
5. Temper outbursts and unpredictable behavior.				
6. Overly sensitive to criticism.				
7. Distractibility or attention span a problem.				
8. Disturbs other children.				
9. Daydreams.				
10. Pouts and sulks.				
11. Mood changes quickly and drastically.				
12. Quarrelsome.				
13. Submissive attitude toward authority.				
14. Restless, always "up and on the go."				
15. Excitable, impulsive.				
16. Excessive demands for teacher's attention.				
17. Appears to be unaccepted by group.				
18. Appears to be easily led by other children.				
19. No sense of fair play.				
20. Appears to lack leadership.				
21. Fails to finish things that he starts.				
22. Childish and immature.				
23. Denies mistakes or blames others.				
24. Does not get along well with other children.				
25. Uncooperative with classmates.				
26. Easily frustrated in efforts.				
27. Uncooperative with teacher.				
28. Difficulty in learning.				

2/62 St Georges Tce
Battery Point
Hobart
Tas 7004

21/10/1998

State Support Services Manager

Timsbury Road School
Glenorchy
7010

Dear Sir/Madam,

My name is Angela Cox. I am a fourth year medical student at the University of Tasmania. As part of the fourth year curriculum I am currently completing a sixth month research project. My chosen topic was Attention Deficit and Hyperactivity Disorder (ADHD). One aspect of my study is determining the role the school plays in the management of children with ADHD.
I understand that the State Support Service is responsible statewide for early special education services, services for the deaf and hearing impaired, autistic children and services to students with physical disabilities.

I would appreciate any information on how this service can be accessed by children with ADHD and under what circumstances help is made available. I am also interested in the role of the Support Teachers that can be recruited to help with the management of these children.

I would be most appreciative if you were able to forward me any information about the service that you provide.

Many Thanks,
Sincerely,

Angela Cox.

Tasmania

DEPARTMENT *of*
EDUCATION, COMMUNITY *and*
CULTURAL DEVELOPMENT

EQUITY AND TEACHER/SCHOOL DEVELOPMENT BRANCH

Dear Angela,

I apologise for the delay in responding to your request, and hope that the information I can provide is helpful.

The State Support Service is one part of the Department of Education's structure to support student's with disabilities and problems with schooling. The State Service as you are aware has responsibility for services to students with low incidence disabilities, as well as having an administrative role in the moderation and allocation of Commonwealth and State funds.

In addition to the State Support Service, each of the seven education districts has a support service comprising support teachers, guidance officers, speech pathologists and social workers, and it is these services which would provide direct assistance to teachers and parents in relation to the needs of children and young people with ADHD.

The aim of District Support Services is to assist schools to implement policies and practices that ensure equitable access to an appropriate education for all students. I have enclosed a brochure from the Derwent Support Service which describes the ways in which support can be provided and how this is accessed. Service models in other districts may vary a little in relation to how they deliver support, but the aims of each would be consistent across the state. I have also enclosed the names and contact numbers of the District Support Service Managers any of whom I am sure would be happy to provide you with any additional information you may require.

Finally I enclose a set of pamphlets developed by the Department concerning the medical, educational and behavioural management of children with ADHD. The pamphlets have been widely distributed to schools, and contain contact information for parent Support Groups around the state.

Good luck with your research and feel free to contact me again if you require any further information.

Yours sincerely

Louise Nehrmann
A/Assistant Manager, State Support Service

9/10/1998
2/62 St Georges Tce,
Battery Point,
Hobart, 7004.

To The Co-ordinator of ADDSUP (Tas) Inc.

Dear Jan,

My name is Angela Cox. I am a fourth year Medical student at the University of Tasmania. I am currently completing a six month research project on ADHD. My main focus for my study was the effect an ADHD child can have on the family and also the role of the school in the management of children with this disorder.

I have been attending several support groups in the south of the state and have been able to gain insight into the effects on the family. I have been reading about the school's role in the management of ADHD children. In some of the literature it has claimed that awareness is growing within the education department and that some state education departments have produced guidelines and information booklets about ADHD for teaching staff. To your knowledge, is that happening in this state?

If you have any information regarding this matter, or could direct me to someone who may it would be greatly appreciated.

Kind Regards,

Angela Cox.

PO Box 514
ULVERSTONE 7315
Ph: 64 259403

14th October 1998

Angela Cox
2/62 St Georges Tce
BATTERY POINT
HOBART TAS 7004

Dear Angela

I am thrilled that you are doing a research project on ADHD and our support group would certainly be interested in hearing the results of your research at some time in the future to publish in our bi-monthly newsletter.

It is certainly correct that some states have produced guidelines and information booklets on ADHD for teaching staff. Many of these were documented in the National Health and Medical Research Council (NHMRC) document and I would strongly recommend you purchase a copy of this. Talk Time Teamwork is another educational document I would highly recommend and this was produced by the Education Department in NSW and also worth following up. You may also be aware that Tasmania's education Dept. for a period of 1 year employed a part-time ADHD Liaison Officer. The 3 enclosed brochures were a product of his 12 months along with an excellent working party. I am not sure however that these brochures are abundant throughout Tasmania as most teachers do not know about them!

I hope this will help with your research. I have also enclosed the last copy of our bi-monthly newsletter for your information.

Please do not hesitate to contact me if you require anything further.

Sincerely,

Jan Clark
Co-ordinator ADDSUP (Tas) Inc.

Encl.