

**Teachers' perceptions of children with Attention Deficit
Hyperactivity Disorder and the effects of Ritalin.**

By

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SUMMARY

Attention Deficit Hyperactivity Disorder (ADHD) often creates significant problems in the classroom for both learner and teacher. Many children with ADHD are plagued with extreme behaviour characteristics that often lead to adverse adult reactions and social rejection. It is believed that teachers often prefer Ritalin as a choice of intervention to cope with the demands of teaching.

This study investigates how teachers view the characteristic behaviour of children with ADHD and the effect that Ritalin has on those perceptions. The second aim was to find out how teachers felt regarding the social relations of children with ADHD and the effect that Ritalin has on those perceptions. The third aim was to determine whether teacher perceptions of ADHD children were influenced by their characteristics (age, gender, type of school, qualifications and experience).

The views/perceptions expressed by teachers in most instances favoured the research authors identified in this study with reference to the characteristic behaviours of ADHD children. However, views expressed on social interactions were not conclusive as the tally produced an even split, identifying perhaps a lack of understanding of what is expected from children with ADHD. The results in both

the above descriptions clearly showed a favourable bias toward the use of Ritalin for producing acceptable behaviour.

The study further identified that when evaluating certain teachers' characteristics such as: gender, age, qualifications, teaching experience and type of school, the following became evident:

- Special education qualifications did not create a better understanding or tolerance of these children, but in fact the opposite was evident
- Gender or age did not influence teachers perceptions
- The feedback from both private and public schools were similar

It is important to note that the limitations identified in this study, stressed the need for future research to be done in this field.

DECLARATION

I hereby declare that the work on : “Teachers’ perceptions of children with Attention Deficit Hyperactivity Disorder and the Effects of Ritalin” is my own work, both in conception and in execution and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

P. G. Govender

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Date

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CHAPTER ONE

1. INTRODUCTION

1.1 Motivation for the study.

Research, done by Mehl-Madrona (2000: 2), estimates Attention Deficit Hyperactivity Disorder (ADHD) to affect between 3-5 percent, or 3.5 million American school age children. At present, the statistics for the effects of ADHD on South African children, are unclear, however 8 to 10.5 percent of the population are estimated to have ADHD (ADHASA, 2003: 1).

ADHD is usually associated with those children who are difficult to control or who have difficulty concentrating. In our current educational environment in South Africa the Inclusive system of education affords every child the right to an appropriate education, where they can develop to the best of their ability in a (as much as possible) normal classroom setting.

Livingston (1997:11) suggests that the number of referrals for ADHD may increase significantly due to the adoption of the outcome-based educational goals. This system predicts that every child reach a minimum level according to the school curriculum. Uncooperative and inattentive students can no longer be passed onto the next grade. Teachers are

found to be directly accountable for the child's performance. In their desperation to improve the child's performance to an acceptable level, teachers often suggest medication to assist with possible inattention. Parents and teachers are presented with a checklist of behaviours and are asked to indicate the extent to which each statement applies to the child. These responses are compared to established norms and if the child does not fall within this normative range, he is diagnosed as ADHD (Livingston, 1997:11).

This system compares well with South Africa's currently adopted Inclusion System of Education and teachers are likely to experience similar problems. Teachers play a very important part in diagnosing children with ADHD. Once diagnosed, these children are classified as having Special Needs, since they require special attention to assist them to learn. The goal of this study is to empower teachers with knowledge of this disorder and to acknowledge their own limitations in these challenging times. As a result, teachers will become more optimistic in the teaching/learning environment of Special Needs children.

1.2 Statement of the problem

Children with Special Needs are being mainstreamed into a system where teachers do not have the necessary qualifications to cope. Many teachers seem to understand obvious disabilities such as blindness, hard of hearing

and other physical disabilities, and appear almost sympathetic toward those children. They seem, however, to have a preconception about children with ADHD, believing them to be lazy or deliberately disruptive. With mainstream classes having many barriers to learning, such as having a large pupil-teacher ratio and poor teacher resources, children with Special Needs are often medicated in order for teachers to cope with the demands of teaching.

This study is aimed at investigating teachers' views/perceptions of ADHD children before and after administering Ritalin, in the hope that the results will provide suitable information for the successful inclusion of Special Needs children in South Africa. The research questions are:

- i) What is the nature of teachers' perceptions of ADHD children with/without Ritalin?
- ii) How teachers perceive social interactions of ADHD children with/without Ritalin?
- iii) Which teachers' characteristics influence their perceptions of ADHD children?

1.3 Aims of the study

1.3.1 To find out how teachers perceive (view) the characteristic behaviours of ADHD children, before and after the administering of Ritalin

1.3.2 To find out how teachers view the social interactions of ADHD children, before and after the administering of Ritalin

1.3.3 To determine the relationship, if any, between perceptions of ADHD children and the following teachers' characteristics:

- (i) age
- (ii) gender
- (iii) type of school taught
- (iv) teaching experience
- (v) teacher qualifications

1.4 Hypotheses:

- 1.4.1 Teachers will not perceive differently, the characteristic behaviour of ADHD children with /without the effects of Ritalin.
- 1.4.2 Teachers will not perceive differently, the social interaction of ADHD children with /without the effects of Ritalin
- 1.4.3 There will be no relationship between teachers' perceptions of ADHD children and the following teachers' characteristics:
 - (i) gender
 - (ii) age
 - (iii) type of school
 - (iv) teaching experience
 - (v) qualifications

1.5 DEFINITION OF TERMS

1.5.1 Teacher:

The term 'teacher' is used in this study to refer to persons who impart their knowledge and skills unto a learner.

1.5.2 Perception:

The term 'perception' is used in this study to show a person's belief in, or a particular viewpoint regarding a particular topic in focus.

1.5.3 Attention Deficit Hyperactivity Disorder (ADHD):

The term ADHD is a disorder that is characterised by hyperactivity, attentional deficits and impulsivity. Behavioural manifestations must appear in more than one setting in order for a diagnosis to be made. It first manifests itself in childhood (DSM-IV, 1994: 79).

1.5.4 Ritalin:

Ritalin is the trade name of methylphenidate, a stimulant medication used in the treatment of the symptoms of ADHD (Reber, 1995:458).

CHAPTER TWO

2. REVIEW OF PREVIOUS WORK DONE IN THIS FIELD

2.1 INTRODUCTION

The South African Department of National Education produced a policy paper, Education White Paper 6: Special Needs Education in building an inclusive education and training system (2001). This White Paper defines inclusive education and training as (a) acknowledging that all children and youth be given the support and an opportunity to learn (b) providing educational structures, systems and learning methods that will be appropriate to the learner's needs, (c) accepting and respecting differences in learners as a result of age, gender, ethnicity, language, class, disability, HIV or other infectious diseases, (d) acknowledging that learning takes place in schools, in the home, in the community and in other formal and informal settings, (e) being able to change attitudes, behaviours, teaching methods, curricula and the environment in order to suit the learner's needs, (f) being able to maximise the participation of learners in the culture and the curriculum of the educational setting and to recognise and minimise barriers to learning (Waghid & Engelbrecht, 2002: 21).

Children with special needs are obliged to be included in both public and private schools in our current education system. The way teachers

respond to the social and educational requirements of a child with exceptional needs may be an important step in determining the success of the educational process used. Teachers are considered the primary resource for the implementation and success of this approach. Teachers often bring preconceived attitudes and misconceptions into the teaching/learning environment relating to children with exceptional conditions. One's perceptions can be influenced by one's personal characteristics, viz. age, gender and level of education. A teacher's beliefs and views determine their actions and decision making in the classroom and toward the child with a problem, which in turn can promote or inhibit a successful learner (Winzer, 2002:34).

The White Paper emphasises that in order for inclusion to work, it has to be accepted by all the stakeholders, especially the teachers. Learners with disabilities and impairments experience barriers to learning daily. These views are supported by the Consultation Paper No:1, which highlights the problems that need to be addressed in order to create a barrier-free learning environment for Special Needs children. Submissions suggest that teachers develop an attitude of acceptance of special learners (obtained through gradual inclusion) and work towards removing or remedying any barriers to learning, which include the attitudes of other children, large pupil-teacher ratio and providing a curriculum that would suit the needs of all children. Other submissions acknowledge that barriers to

learning are experienced by 400,000 disabled children, most of whom are not schooled or trained, from the 70 percent who are mainstreamed, experience exclusion in the learning environment and lack of, or inappropriately teaching regarding their needs (Education White Paper 6, 2001: 53).

The White Paper: 6 (2001: 49) has set professional guidelines for educators to address, in order to minimise barriers to learning. These include teachers being aware of what learners experience as problematic in the class, understanding the diverse needs of learners in the class and making a special effort through developing the required competencies, so that the learning environment can be a fun, safe and a productive place to be in.

The researcher has attempted to telephonically interview some key members in the Gauteng Education Department regarding their views on the barriers to learning currently experienced by Special Needs children in mainstream schools. They have, unfortunately not provided any feedback by the time this study was submitted.

ADHD is subject to a great deal of debate and many opinions are expressed from many different quarters regarding behaviour identification, causes and treatment interventions of ADHD and these are abundantly

documented globally. Unfortunately, research material focusing on the *perceptions of teachers* in this regard is extremely wanting. These views are also expressed by Glass (2001: 72), having conducted a similar study. The writer wishes to express an opinion that since ADHD's characteristics are globally defined, research material provided for this study was sourced from many international researchers and considered a necessary step to setting a trend to viewing ADHD children in terms of *teachers' perceptions*.

2.2 Evaluating teacher perceptions of the characteristic behaviour of children with Attention Deficit Hyperactivity Disorder (ADHD).

Barkley (1990) has contributed a great deal of literature and research on ADHD. It is disappointing then to find that although he acknowledges that children with ADHD experience problems in interacting with their teachers, that not enough is written about *that* relationship, except to state that the frustrations experienced by teachers in working with difficult children causes teachers to behave negatively toward them. He, instead, describes the problem relationships experienced by these children in a much wider context of 'social rejection', focusing on relationship problems with peers.

✓ Investigations of research done by Glass and Wagar (2000: 413) emphasise the widely publicised condition of Attention Deficit Hyperactivity Disorder (ADHD) affecting approximately five percent of American school-age children over the past two decades. In comparison, the number of

South African children with ADHD are not conclusive, however, 8 to 10.5 percent of the population are estimated as having ADHD (ADHASA, 2003: 1).

Children with ADHD characteristics often experience severe problems in the classroom. Even though ADHD behaviours are apparent in various situations, the classroom is still where it is most noticeable. Children with ADHD in a classroom tend to demonstrate a wide variety of behaviours that may disrupt the teaching process, as well as interrupt their own learning, which may include off-task behaviour, physical restlessness and inappropriate or intrusive talking (Greene, 2002: 81).

Teachers are considered to play a key role in identifying potential children with ADHD, since parents may be too close to their children to identify them (McFarland, Kolstad & Briggs, 1995:599).

Diagnosing children with ADHD is difficult, bearing in mind the numerous symptoms, characteristics and combination of symptoms. According to Beugin (McFarland, et al., 1995: 597), teachers are the ones who are most likely to identify ADHD children based on their observations of symptoms such as hyperactivity, short attention span; poor social skills; insubordination; high levels of frustration and disruptive behaviour, which teachers need to know about in order to associate them to ADHD. The

teachers' ability to identifying these characteristics is subjective and considered to be an art, rather than a science (McFarland, et al., 1995: 597).

Buchaoff and McCall (McFarland, et al., 1995: 597), suggest that teachers who needed to identify and rate ADHD type behaviours in the classroom, will also need to observe children's behaviour for awhile before making the distinction between ADHD or excessive, normal behaviour. The behaviour includes the child's inability to remain seated, to stop talking about inappropriate things, finding it difficult to cease interrupting others, being easily distractible and having an inability to concentrate or an inability to switch from a particular task to another. Other behavioural characteristics that help the classroom teacher to identify the ADHD child are the continuous loss of personal items, which include clothing, stationery or money, losing letters or notes, leaving assigned tasks unfinished, frequently talking and moving about without listening in class (McFarland, et al., 1995: 597).

Breggin and Breggin (1995: 55) debate the validity of the psychiatric diagnosis used for ADHD and the justification for medication prescribed. Their concern involves the diagnosing of these children that is often done by parents or teachers (non-experts in the field) and the seriousness that hyperactivity is seen as a disruptive behaviour disorder. A disorder that

adults and others instead of the person affected, find distressing and one that society finds difficult in controlling.

Breggin and Breggin (1995: 57) are particularly critical of Barkley's reference to ADHD children as 'non-compliant'. They suggest that Barkley is quick to blame these children for their behaviour instead of looking to the adults and authorities that the child comes in contact with, since they control the conditions the child is in.

Further concerns expressed by the Breggin and Breggin (1995: 58), question the prevalence and severity of the symptoms that seem to occur in some situations and not in others and seem to be minimal during school holidays. They imply that society is also quick to medicate these children whom they believe to have a genetic and biochemical cause to this disorder and seen to have a 'mental illness'.

Glass and Weagar's (2000: 413) studies compare closely with those of Breggin and Breggin. They too view ADHD as being socially construed. It is suggested that blaming the children for their unruly behaviour, takes the responsibility away from their environment. The researchers' concerns are that with the current stressful teaching conditions, which include large pupil-teacher ratio and limited resources, teachers may lack motivation and tend to ignore exploring different teaching methods, finding it easier and

less time-consuming to over identify children with problem behaviours as having ADHD.

Glass and Weagar (2000: 413) conclude their findings by questioning the legitimacy of diagnosing children with ADHD on characteristics alone, that may be assessed by teachers who do not have sufficient knowledge on ADHD type behaviours and normal childhood behaviours.

Livingston (1997: 9) tries to draw distinction between what is appropriate behaviour for a child and what is not. His investigation of the correct procedure for diagnosing ADHD begins with thorough interviews of the parents in order to obtain a complete case history. The child is then interviewed in order to understand how he/she views the problems. A complete medical examination is done to rule out physiological problems. The child is then given an intelligence and achievement test and screened for other mental problems. Only then are the parents' and teachers' ratings evaluated and a diagnosis reached. Since very few physicians spend such a lengthy time performing these examinations, the ADHD diagnoses are left to the teachers and parents who fill out the behaviour rating scales.

Charles, Schain, Zelniker and Guthrie (1979: 412) focus on the subjective and objective assessments needed to measure the characteristics of ADHD. The objective assessments, done by the physician, need to be

correlated to parent and teacher rating scales in order to reach a diagnosis. This is often difficult, since teachers are considered to be subjective, based on teachers' perceived appropriate expectations and accurate impressions of the child. Anything outside those expectations and impressions are considered by teachers to be deviant behaviour.

The responses to these questions, i.e. 'not at all' to 'very much' draw that distinction between what is appropriate and what is pathological. This is based purely on the judgement of the experience of the rater on that particular child's behaviour. A teacher can experience a child's distractibility, forgetfulness and fidgetiness as nuisance, but acceptable behaviour for a child, and as such can give those behaviours a low rating, while teachers can see the same behaviours as nuisance and intolerable and can give it a high score.

Livingston's (1997: 9) concern is that by using such flexible diagnostic criteria, the prevalence of the number of ADHD children diagnosed could either remain constant or decrease, but instead, has dramatically increased. This result questions the tolerance levels of teachers.

2.3 Teachers' views of social relations of children with Attention Deficit Hyperactivity Disorder(ADHD)

Landau and Moore (1991:235) suggest that teachers, parents and medical practitioners have not considered the socialising problems experienced by ADHD to be serious until recently. They refer to studies done by Campbell, Endman and Bernfeld, who have found that children with hyperactivity seem to experience more intense and greater negative feedback from their peers and teachers compared to their peers, which could be due to the ADHD child's intrusive, annoying and adverse behaviour toward others. Their hyperactivity also tends to trigger significantly more negative teacher feedback directed towards the rest of the children in the classroom (Landau & Moore, 1991:237).

Glass and Wagar (2000: 414) seem concerned that the school systems are unable to evaluate ADHD children systemically, taking into account their environment and examining their interactions with others. Durbach's (2001: 11) study supports the systemic view of ADHD. ADHD children are no longer blamed for their behaviour, instead, their behaviour is viewed as a product of their interrelationships with others. Their relationships with others can result in positive behaviour and productivity brought about by compatibility and 'goodness-of-fit' that exists in the group. If these factors are lacking, children may respond through aggression, frustration and disruption.

Behaviour is seen in a circular pattern of reciprocal factors influencing behaviour in one another. As a result, when an adult is stressed they can react harshly toward a child who will in turn react aggressively causing disruption, which the teacher can counteract by rejecting the child.

Teachers that are more flexible and understanding of ADHD children, are better able to cope with their disruptive behaviours.

Researchers acknowledge that children with ADHD experience impairments in peer relations, which causes them to be easily rejected by peers after only a brief interaction with them and having much fewer friends than their non-ADHD counterparts. They seem to have problems in regulating their feelings and sustaining their associative play. As a result, they tend to prefer playing with other ADHD youths (Bagwell, 2001:2). This indicates that others, like themselves, do not have social skills that determine acceptable behaviour and they are likely to feel more comfortable with them.

Landau and Moore (1991; 238) refer to various studies done on social skills using samples of ADHD children regarding cognitive measures of social perspective-taking. They found that both normal and ADHD children seem to be similar in identifying positive and negative behaviours of others. However, having the knowledge of these skills does not make ADHD children competent in using them to make friends. They had difficulty in

toning down their aggressiveness enough to make and maintain friendships.

Barkley (1990: 544), identifies the ADHD child as belonging to one of two groups, as the socially rejected or the socially withdrawn. Those children that are neglected are the ones with ADHD but without hyperactivity. They seem anxious and depressed instead and withdraw by isolating themselves from others. The children who are rejected are those who are mostly disruptive and aggressive. They are often cast out of peer groups and forced to play with others like themselves.

2.4 Teachers' perceptions of methylphenidate (Ritalin)

The behavioural problem that mainly manifests itself in children known to have ADHD has first been viewed by George Still, in his series of lectures delivered at the Royal College of Physicians in 1902, as a serious medical and behavioural condition. Charles Bradley first reported the use of stimulant medication in children with behaviour problems in relation to improving conduct and school performance in 1937. Positive reports increased with the use of methylphenidate to 150 000 children in the 1960s and 1970s, and to approximately 1.5 million in the 5 to 18 year old age group of American children with ADHD administered with Ritalin by mid 1995. Studies of Ritalin over the years, have shown repeated

improvement of 73-77 percent of ADHD symptoms (Kaminester, 1997: 105).

To date, there are currently three methods of treating children with ADHD which include, (a) stimulant medication, (b) behaviour therapy, (c) combining both (a) and (b). Stimulant medication (Ritalin) is currently considered to be the most popular treatment for approximately 80 percent of school-age children (McFarland, Kolstad & Briggs, 1995: 599).

References to recent research indicate that Ritalin redirects attention so that children are able to concentrate better and improve their relationships with their teachers and peers. Medication was also found to increase appropriate behaviour and to improve auditory processing and reading skills (McFarland, Kolstad & Briggs, 1995: 599).

Livingston (1997; 14), argues that the diagnosis and prescribing of medication is made so easy, since the traditional methods of behaviour control in the classroom (punishment) was taken away. Teachers are now forced to provide learning material that would meet the individual needs of the child. Teachers are finding it difficult to be flexible and struggle to change the well-established education environment, as a result, the child's behaviour is changed through medication.

Glass and Wegar's (2000:415) views are similar in their concern that the characteristic behaviour of children with ADHD is often seen as undesirable, negative or "abnormal", rather than a child with "extreme traits". This abnormality advocates the use of medication to control social behaviours. It is not surprising then that the diagnosis of ADHD relating to behaviours, which include excessive talking, fidgeting, an inability to concentrate for long periods of time, impulsivity, carelessness and disorganisation, often accompany a prescription for medication that would decrease these behaviours (Glass & Wegar, 2000:413).

In later studies, Barkley and Cunningham (DuPaul & Barkley, 1991:206) state some positive effects obtained from stimulant medications regarding the ability of ADHD to focus their attention to assigned class-tasks and to improving their behaviour to the extent of it being similar to their "normal" counterparts. The children also seem to control their behaviour and sustain their attention for longer periods when their medication dose is increased.

DuPaul and Barkley (1991:207) refer to research findings which emphasise the significant improvement made by Ritalin to the quality of social interactions of ADHD children with their parents, teachers and peers, making them more compliant to authority figure commands and improving their responsiveness to their social interactions. These children were also

found to demonstrate more appropriate behaviours with others, leading to a greater degree of acceptance by their peers.

Barkley and DuPaul (1991: 213) support the short-term effects of Ritalin over the side-effects, that include insomnia and appetite reduction. They also add that Ritalin does not show the child how to compensate for his symptomatic behaviour. The efficacy of stimulant medication treatment is limited in comparison to other interventions, such as behaviour modification, that optimises the possibility of long-term improvement regarding the academic, behavioural and social performance of children with ADHD (DuPaul & Barkley, 1991: 213).

Acute dose studies done by Hinshaw (Pelham Jr., 1993: 202) show that for many ADHD children taking moderate doses of Ritalin, a decrease in their aggression and an increase in positive social interactions were noted. The beneficial effects of the medication were more evident when the medicated children were in peer groups rather than in dyads.

Hinshaw (1994: 106) emphasises that stimulant medication has a time course of approximately four hours before it dissipates. Attention, impulse control, compliance and aggression are improved during this time, though short lived. Children with ADHD have to take medication at least two times a school day for them to maintain focused behaviour. By the time the child

goes home, the effects of the medication has worn off and the family experiences the child as he is. Long-term benefits are inconclusive.

According to Pelham Jr. (1993:201), classroom observations of the improvement of performance and behaviour relating to disruptiveness, are routinely done by the teacher. ADHD children medicated with stimulant medication are increasing their time on-tasks and completing more assigned academic work with accuracy. Pelham Jr.'s. (1993:201) studies support stimulant medication by highlighting the positive effects in compliance with the teacher request. As a result, teachers are becoming more sensitive in their ratings when children are on stimulant medication than when they are off it (Charles,Richard, Schain, Zelniker & Guthrie, 1979 :413).

Pelham Jr. (1993: 213) suggests that even though stimulant medication (Ritalin) is widely recommended for children with ADHD, it has limitations in clinical efficacy, suggesting that it does not work for all ADHD children. These views correlate with South African researcher, O'Connor (1999: 6), who estimates that Ritalin works in four out of ten children. Pelham Jr. (1993: 6) claims that Ritalin is not enough to create a normal range of academic and social functioning in the child and its effects are limited to the time period in which the dose is physiologically active, which is approximately four hours. Having the child medicated with Ritalin does not

eradicate other problems such as familial ones that may exacerbate the child's problems. The view that long-term stimulant medication improves the prognosis of the child with ADHD regarding academic achievement or social functioning is not evident. As a result, these limitations make it necessary for other methods of interventions to be investigated.

O' Connor (1999: 6), a South African researcher, has evaluated some controversy over the diagnosis of ADHD children and the medication involved. He emphasises that there is yet, no one cause of ADHD, though American and British studies suggest biochemical and neurobiological reasons for ADHD symptoms. He briefly mentions sceptics calling ADHD a fraud and others stating that it has been a disorder around for centuries and has evolved through the stresses of modern times.

O'Connor (1999: 6) expresses his concern over the increase in prescribing Ritalin for ADHD, since studies reviewed in his paper show that only four out of ten children experience success with this drug. He makes reference to a single case study of a child on Ritalin, for four years and for now, as a recovering drug addict holding Ritalin responsible for her habit and for feeling 'like a vegie' for three hours after ingesting it. O'Connor stresses that it holds a Schedule Seven (restricted) status and should be closely monitored by parents and teachers in order to prevent abuse of it.

Glass and Weagar's (2000:413) findings are similar to those of Breggin and Breggin (1995: 55) in explaining that medicating ADHD children is unnecessary. They too implied that medication is used as a social need. One that would absolve the adults, involved with the child on a daily basis, from responsibility for the child's social and academic problems. Giving misbehaved and unruly children a medical label makes their behaviour more acceptable. These researchers seem concerned that the school systems are unable to evaluate children systemically, taking into account their environment and examining their interactions with others.

2.5 Teachers' characteristics and children with ADHD

Studies reviewed were not specific enough to be represented under separate subheadings.

Barkley (1990: 540) has developed many rating scales for the ADHD assessment and stresses the importance of accurate monitoring of symptoms by teachers in order to provide the appropriate intervention. His comments are in line with ones made in this study by Livingston (1997: 9) and Charles et al.,(1979; 412).

It is surprising though, that with all the research done on ADHD, Barkley's contribution on perceptions of significant others, with whom the ADHD child daily interacts, is noticeably limited. He briefly mentions that teachers'

attitudes and lack of knowledge, lead to misconceptions about the disorder. As a result teachers often choose the incorrect form of intervention. Teachers may lack the motivation to try different types of behaviour programs for lack of training, or for having a preconceived view of ADHD, or for resenting to change their teaching styles. It is assumed that teachers are then more likely to support the medication intervention. There are some concerns that the level of the teachers' tolerance of children with ADHD can affect their perceptions regarding these children and in turn can affect their reporting and ratings, that can in turn impact on their intervention programs used. A suggestion is made to informally screen educators for the appropriate qualities needed to teach these children.

Studies referred to by Greene (2002:2) show that the very behaviours that include hyperactive-impulsivity and inattentiveness, can result in stress brought about by the day to day experiences with problematic children, that can adversely affect the perceptions made by teachers. It is also this type of stress that adversely effects the perceptions made by teachers. It is this type of stress that determines the degree of compatibility between the child's motivated behaviour and the expectations and demands made by the teacher.

Glass' (2001: 72) motivation for her research was based on the absolute need to know more about the teacher variables that affect their outlook of

children with ADHD. She emphasises that this need was also prompted by the scarcity of literature in this field.

Maintaining her stance in earlier work referred to by Durbach (2001: 11), Glass argues that the teacher's tolerance level of the ADHD child will determine the teacher-child relationship in the class and that this level of tolerance often influences the way the teacher interacts with the child.

The age of the teacher, the years taught and the knowledge gained over the years, will determine the teaching styles used (Glass, 2001: 71).

Many beginner teachers find themselves ill-equipped to cope with ADHD children in their class, simply because they do not have adequate knowledge about ADHD and are unable to identify the symptoms or characteristics. This creates a barrier for the class teacher who should play an important role in diagnosing and treating the child with ADHD (McFarland, et al., 1995: 597).

Glass (2001: 71) correlates the age of the teacher to the years taught and relates this to more experienced teachers who are more likely to use positive teaching strategies. Indicating that teachers with more experience are more flexible and have more confidence and more resources at their disposal, compared to non-experienced teachers who adopt a more rigid teaching style.

Studies done by Glass and Wagar (2000:416) revealed that even though teachers knew the general accepted incidence of ADHD to be approximately five percent, thirty-six percent of teachers identified six to fifteen percent of the children in their class to having ADHD, twenty-three percent identified sixteen to twenty-five percent of their children to having ADHD and thirteen percent identified twenty-six percent and more of their children to having the disorder. This implies that teachers tend to presuppose children with behaviour problems to possibly having ADHD.

Whether the teachers were from public or private schools, did not offer much influence on their perceptions as shown in the above study, which also revealed that after confirming the diagnosis of ADHD children, the estimated mean incidence of teachers' perceptions of ADHD in public schools were found to be eight percent and the mean incidence in private schools to be twelve percent. Teachers' perceptions from both types of schools where children displayed ADHD type behaviours, increased to 71.55 percent of the teachers believing that more children were ADHD than were originally diagnosed. These findings suggest that teachers believe the problem of ADHD to be beyond their control and having that view, releases teachers from the responsibilities of dealing with the disorder, thus leaving it to medication instead (Glass & Wagar, 2000: 416).

Children with ADHD, learning disabilities and behaviour disorders, are generally not physically distinguishable from other children without disabilities, making their condition invisible or hidden. In his study on teachers' views toward these children, Cook (2001: 6) found that teachers were less knowledgeable of the characteristics and needs of hidden disabilities and seemed to be more indifferent toward them.

An interpretation of Cook's (2001: 6) studies revealed that teachers differentiate children according to the obviousness of their disability. The more obvious the disability (physically observable), the more attention is paid to them, not necessarily appropriate or positive attention is given. When children have hidden disabilities, they appear physically normal and teachers tend to believe that they are deliberately violating the teacher's expectations and are troublemakers. Schools adopt a uniform level of acceptable behaviour despite children's problems. Schools tend to down play the disabilities and teachers are not aware or not knowledgeable to the facts, resulting in demands placed on children that are difficult to meet. This leads to low teacher tolerance and rejection of children with problem behaviour, often blaming them for their behaviour and performance in the classroom. Cook emphasises that schools should be transparent with disabled children and prepare teachers for the inclusion of such a child (Cook, 2001:6).

2.6 Conclusion

The inclusion of learners with Special Needs documented in the Education White Paper: 6, is an important step to providing equal educational opportunities and to highlighting barriers to learning that need to be addressed in order for all learners to benefit from our system of education. This working document allows us a 20 year time frame for implementation, in which we can learn from the shortcomings and successes of other countries and our own in order to make inclusion a success.

The course of education has changed in South Africa by the implementation of inclusion. Guidelines provided in the White Paper: 6 stipulates correct inclusion practices, while other international literature share their experiences from a system already in use. Studies reviewed in this Chapter explored controversial views on the existence of ADHD, the *diagnostic procedures used, the use of stimulant medication and* perceptions that could affect any of these factors. The researcher tried to gain some clarity by interpreting a basic medical diagnostic disorder as a social one, by suggesting a possible systematic link. In so doing, attempts were made to show how tolerance and compatibility could play an important part in how the teacher views children's behaviour and rates them.

Children with ADHD often exhibit difficult behaviour patterns in the classroom. Improvement in these behaviours seem to be due to stimulant related medications that are duly noted on teacher rating scales. This implies that the impact of medicating ADHD children, may improve their social environment.

The classroom teacher is an important part of the child's school environment and teachers' behaviour and variables have a critical affect on children with ADHD. Teachers' perceptions of what deviant or deficient behaviours are can greatly influence the potential for children to be diagnosed with ADHD (Greene, 1995:84).

CHAPTER THREE

3. RESEARCH METHODOLOGY

McBurnett (Goldstein & Goldstein, 1998: 251), emphasises that the diagnosing of ADHD is focused on the symptoms of ADHD and their severity of impairment in educational, occupational and home settings.

Atkins and Pelham (Goldstein & Goldstein, 1998: 251) stresses the importance of direct observations of the ADHD child in different settings that can be reflected in rating scales and behaviour questionnaires.

3.1 Research Design

This chapter consists of the research methods used in this study.

Descriptive research is used in this study since its objective is to describe what happens behaviourally. In descriptive research, a few cases are carefully observed over a period of time and measured as it is done in this study where the behaviour of ADHD children and their behaviour in response to Ritalin are observed and reflected by teachers. Their observations are described by means of checklists and behaviour questionnaires (Rosnow & Rosenthal 1996: 15).

3.2 The study sample

This study attempts to investigate the perceptions of teachers, both in public and private schools, regarding the behaviour of children with ADHD and the effects of Ritalin on that behaviour. The study sample consisted of teachers from both types of schools who have volunteered as respondents. The sample was considered accidental or incidental since not every teacher in a public and private school was given an equal opportunity of being chosen for this study (Sibaya, 1984:39).

The overall amount of one hundred and forty-seven questionnaires were sent to the teachers of six public schools and four private schools, who have taught ADHD children administered with Ritalin. Principals of selected schools in the Gauteng region were asked to submit a list of teachers with the above experience who volunteered for this study. A total of one hundred and three teachers were obtained for this study. Sixty-six teachers from public schools and thirty-seven from private schools were acquired.

Permission was obtained from the principals in the form of verbal consent prior to this research.

3.3 The research instrument and its administration.

Questionnaires are used in this study since they have numerically scaled answers that attempt to objectify and quantify adults' responses regarding their opinions about children's behaviour. Normative data are developed on these responses. Rating scales are often used in child psychopathology to determine conduct disorder or hyperactivity (Barkley, 1981: 104)

In 1969, Conners designed the most popular and commonly used rating scales specifically used to measure ADHD symptoms (Goldstein & Goldstein, 1998: 65).

In 1978, Thomas Achenbach originally developed a parent report measure of children with ADHD which was later used as a parallel form to obtain teacher ratings of children with ADHD (Goldstein & Goldstein, 1998: 266). DuPaul developed an ADHD rating scale in 1991 in the process of his research, which was edited by Barkley (Goldstein & Goldstein, 1998: 275).

Barkley (Goldstein & Goldstein, 1998: 277) developed a School Situations Questionnaire in 1997 that measured the impact of the child's behaviour in school related situations. Barkley claims that information obtained from school situations helped the practitioners to understand the connection between the symptoms of ADHD and their impact on different situations.

With this knowledge practitioners can develop in the child, compensatory skills in situations that will reduce the negative impact of their behaviour (Goldstein & Goldstein, 1998: 277).

Barkley's ADHD Rating Scale (1992: 46) was developed by himself and Dr. George DuPaul in order to evaluate the occurrence of ADHD symptoms in children. They used 14 items from the DSM-III-R ADHD criteria to format the rating scale. The items on the scale were used to identify *Inattentive-Hyperactive* and *Impulsive-Hyperactive* behaviour in assisting to diagnose ADHD in children. This scale was also designed to be completed by parents and teachers (Barkley, 1992:45).

To date, behaviour questionnaires, based on observations and subjectivity, are still used for the basic diagnosing of ADHD children (Charles, et al., 1979:412).

The questionnaire in this study evaluates whether teachers' perceptions/views are consistent with the ADHD diagnosis regarding *characteristic behaviour* and *social interactions* of these children, with and without Ritalin. This questionnaire further seeks to explore whether certain teacher characteristics such as, age, gender, type of school, teacher qualifications and teacher experience, influence those perceptions.

Teachers were provided with two sets of questionnaires. The first section of the questionnaire deals primarily with biographical information with variables pertaining to gender, age group (20-29; 30-39; 40-49; 50+), teachers' qualifications (diploma/degree and knowledge of special education), years of experience and type of school currently teaching in (public or private school). Further questions asked teachers whether they are currently teaching a child with ADHD, medicated with Ritalin and requested the teacher to have a particular child in mind when filling out the following questionnaires.

The format of Barkley's ADHD Rating Scale (1992:46) was used as a guideline to adapt the second part of the questionnaire. This study consisted of two sections, with the first relating to teachers' observations of ADHD children before the administering of Ritalin and the second section relates to teachers observations of ADHD children after the administering of Ritalin. Both scales contained the identical items. The first 10 items on the scale were taken from the DSM-IV (1994:83) diagnostic criteria for ADHD and used in this study to identify the *characteristic behaviour* of ADHD children before and after Ritalin. Items 11 to 17 focus on general communication skills needed to identify the level of *social interactions* amongst children with ADHD before and after Ritalin. This scale was designed to be used by teachers who currently teach children diagnosed with ADHD administered with Ritalin. Teachers are requested to observe

one particular child, with and without Ritalin, when completing the questionnaires.

3.4 Analysis of data.

For each of the questionnaires a total score will be obtained. An average score will be worked out. The study sample will be divided on the basis of this average. Those who obtained an average and above average score will form one group. While another group will be formed by those respondents who obtained scores below the average. A frequency for each group will be counted. Statistical tests for categorical data will be applied.

Data for aim number one, relating to the finding out of what teachers perceive as characteristic behaviours of ADHD children, with and without Ritalin, will be gathered from the ADHD Teacher rating scale. Items number 1-10 will be considered for this analysis.

Aim number two concerns teachers' views regarding the social relations of children with ADHD with and without Ritalin. Data will be obtained from the ADHD Teacher rating scale. Items number 11-17 will be considered for this analysis.

The data for aim three regarding the possible relationship between teachers' perceptions of ADHD children to certain teachers' characteristics, will be collected throughout items 1-17. A total score will be cross-tabulated with teachers' characteristics.

3.5 Procedures for administration of questionnaires.

The principal of each school was contacted telephonically and given information about the study. They were all given an opportunity to be part of this study or to refuse. All permission was granted verbally.

Principals were given a day to discuss the study with their teachers and to obtain volunteers. The number of questionnaires sent to each school, matched the number of volunteers. The principals nominated a contact person who was responsible for overseeing the handing out of questionnaires. *The requesting for confidentiality of information obtained* highlighted the importance of the volunteers not discussing their responses with other teachers. The researcher spent some time with each contact person, explaining the importance of the respondents focusing their observations on *one* particular diagnosed ADHD child and on the procedure '*with* and *without*' questionnaires, explained. This information was to be passed onto the volunteers to help with clarification. The researcher and contact person agreed upon specific days for delivery and

collection of questionnaires. Questionnaires were collected within a minimum of one day and a maximum of two days of completion.

At the end of this study, each school that participated will receive information containing the following:

- 1) An introduction, which consists of the reasons for this study.
- 2) The revised Barkley scales which was used in this study for teachers of ADHD children.
- 3) Recommendations made in this study.

This information will hopefully enlighten teachers on their perceptions and their limitations regarding children with ADHD.

3.6 CONCLUSION

Chapter Three has detailed the research design and methodology, the data collection and the research instrument. Theory on previous relevant research has guided any research design selected.

Chapter Four will discuss the study sample, analysis and interpretation of data.

CHAPTER FOUR

4. PRESENTATION AND DISCUSSION OF RESULTS

4.1 Administration of the scale

One hundred and forty seven questionnaires were distributed to six public schools and four private schools. One hundred and nine were returned.

One hundred and three questionnaires were completed and six were incomplete, as a result, those six were rendered invalid.

The composition of the final study sample was as follows

(See Table 4.1,)

TABLE: 4.1 : Distribution of subjects in study sample

<u>AGE</u>	20 - 25	26 - 29	30 - 34	35 - 39	40 - 49	50 - 59	60 +	<u>N = 103</u>
	5	14	21	25	22	8	8	
<u>GENDER</u>	MALE				FEMALE			
	6				97			
<u>TYPE OF SCHOOL</u>	PUBLIC				PRIVATE			
	66				37			
<u>LEVEL OF QUALIFICATION</u>	TEACHING DIPLOMA / DEGREE				TEACHING DIPLOMA / DEGREE <i>PLUS</i> KNOWLEDGE OF SPECIAL EDUCATION			
	72				31			
<u>TEACHING EXPERIENCE</u>	0 - 4 YRS	5 - 8 YRS	9 - 12 YRS	13 - 15 YRS	16 - 19 YRS	20 + YRS		
	11	13	24	21	12	22		

The sample that contributed to this study mostly composed of female teachers (97) compared to the 6 male teacher participants. The majority of teachers were in the 30 to 34 age bracket, while only 19 were of the ages between 20 – 29 and 16 were over the age of 50. The sample of teachers currently teaching in different types of schools, viz. public and private schools, comprised of 66 in public schools and 37 in private schools. It was established that 72 of the respondents possessed teaching diplomas/degrees, while 31 acquired teaching diplomas/degrees *plus* knowledge of Special Education. With regard to their teaching experience, 48 teachers taught for less than twelve years and 55 taught for thirteen years and longer.

4.2 Analysis of hypotheses

Total scores were obtained for each subject, by summing up all their scores for each item, with seventeen items in all. A high total score above the average indicates a positive view (perception), interpreted as responses regarding more appropriate and acceptable behaviour. In contrast a low total score, which is below the average, indicates a negative view (perception of deviant behaviour) towards children with ADHD and Ritalin. A general mean score was obtained by adding the total scores of the participants and dividing the sum by the number of respondents, i.e. $\bar{X} = 3380$ and $n = 103$, therefore making the general mean score 32.8

Since we have frequencies or nominal data, the Chi-square test will be used to analyse the following hypotheses (Siegel, 1957: 42-47).

**4.2.1 Valence of perception in the study sample
(Characteristic Behaviour before and after the use of Ritalin)**

Reiteration of hypothesis number 1.

“Teachers will not perceive differently, the characteristic behaviour of ADHD children with /without the effects of Ritalin”.

Here we want to find out how teachers perceive the characteristic behaviour of ADHD children before and after administering Ritalin.

Table 4.2 Teachers’ views of the characteristic behaviour of children with ADHD before and after administering Ritalin (N=103).

Characteristic Behaviour	Below	Above
Without Ritalin	100	3
With Ritalin	17	86

Chi ² = 136.28 df = 1 p < 0.05

The above table reflects that only 3% of the respondents are accepting of the characteristic behaviour of children with ADHD without the use of Ritalin, whilst 83% of the respondents are accepting after administering Ritalin.

Our obtained Chi-square value of 136.28 at $df = 1$ is highly significant at the 0.05 level of significance. We conclude that teachers differ in their views or perceptions of these children. We therefore reject the null hypothesis (H_0) and the alternative is upheld.

The graphical representation in figure 1 supports these results by providing a visual representation of the views expressed by teachers regarding ADHD children's characteristic behaviour before and after the administering of Ritalin compared to ADHD children without Ritalin.

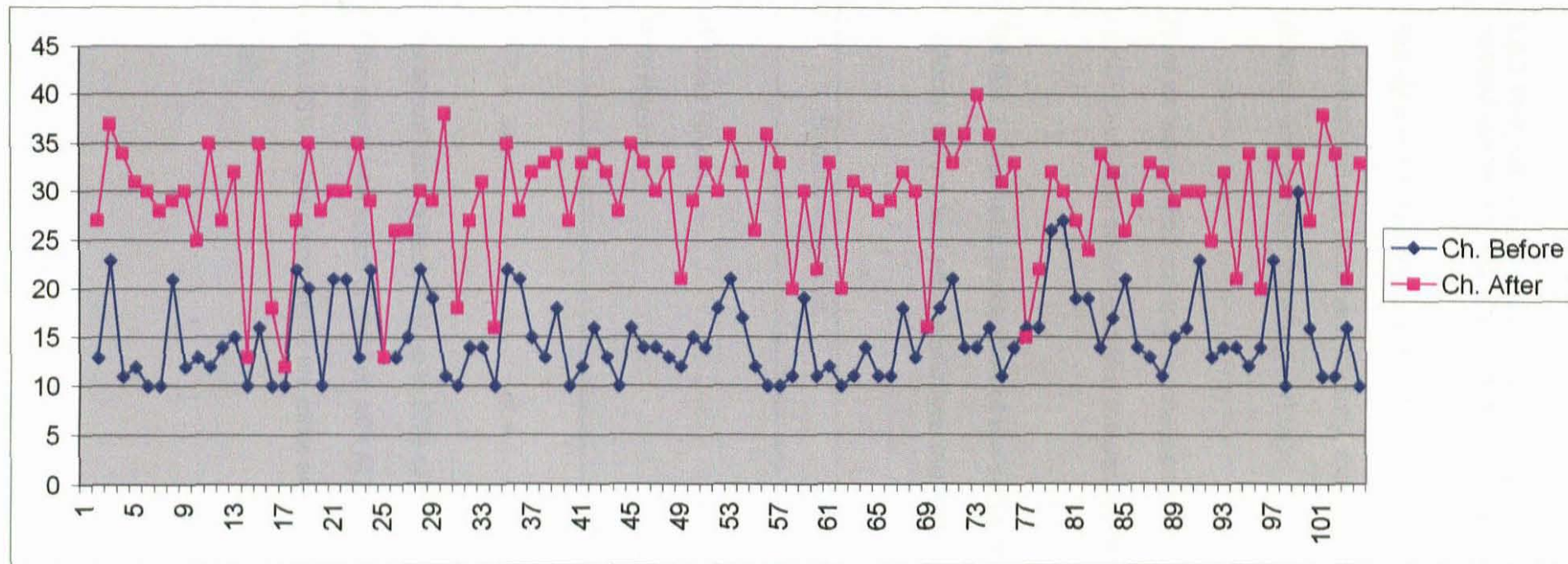


Figure 1 : A graphical representation of teachers' views regarding the characteristic behaviour of ADHD children with and without the use of Ritalin.

4.2.2 Valence of perception in the study sample (Social Interaction before and after the use of Ritalin)

Reiteration of hypothesis number 2.

“Teachers will not perceive differently, the social interaction of ADHD children with /without the effect of Ritalin”.

Here we want to find out how, teachers generally view the social interaction of ADHD children before and after the use of Ritalin.

Table 4.3 Teachers’ perception of the social interaction of ADHD children before and after administering Ritalin (N=103).

Social Interactions	Below	Above
Without Ritalin	46	57
With Ritalin	7	96

Chi ² = 38.64

df = 1

p > 0.05

The above table reflects that up to 55% of the respondents are accepting of the social interaction of children with ADHD without the use of Ritalin, whilst 93% of the respondents are more accepting after administering Ritalin.

Our obtained Chi-square value of 38.64 at $df = 1$ is highly significant at the 0.05 level of significance. We conclude that teachers differ in their views or perceptions of these children. We therefore reject the null hypothesis (H_0) and the alternative is upheld.

The graphical representation in figure 2 supports these results by providing a visual representation of the views expressed by teachers regarding these children's social interactions before and after the administration of Ritalin.

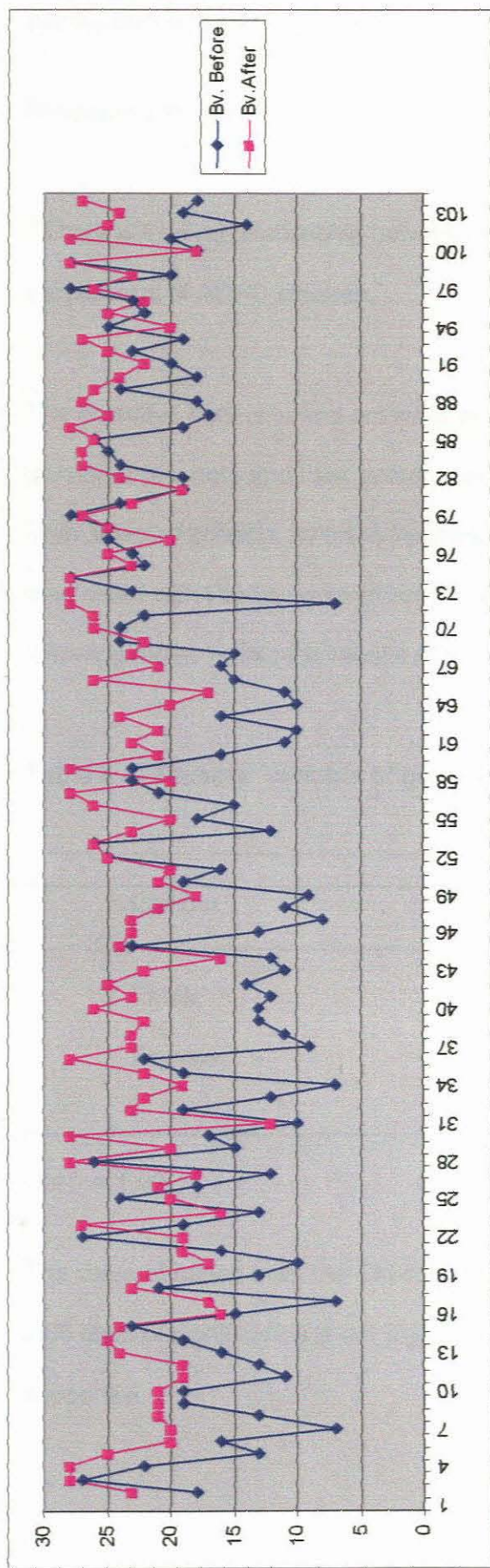


Figure 2 : A graphical representation of teachers' views regarding the social interaction of ADHD children with and without the use of

Ritalin

4.2.3 The relationship between the variable of gender and the perception of children with ADHD.

Reiteration of hypothesis number 3.1

“There will be no relationship between the gender of the teacher and their perceptions of ADHD children.”

The objective here is to find out whether there is a difference between the gender of teachers and their perceptions of children with ADHD. Teachers from selected schools, who are involved with children with ADHD medicated with Ritalin, were invited to participate in this study. The following tables reflect the results of the respondents.

Table 4.4Teachers’ variable of gender and perception (N =103).

Gender	Perceptions	
	Below	Above
Male	6	0
Female	82	15

Chi ² = 1.09 df = 1 p > 0.05

The value obtained from the Chi-square analysis is 1.09 at df = 1 on the 0.05 level of significance is not significant. The null hypothesis is therefore supported.

Table 4.4 indicate that female teachers have obtained 85% of scores above the mean and 15% below the mean, whilst male teachers obtain 100% of scores above the mean. It should be noted however, that from the sample of 103 teachers, 97 were female and 6 were male.

Since the Chi-square value is not significant at the 0.05 level of significance, no relationship between gender and teachers' perception of ADHD children is established. Therefore, the hypothesis that no relationship exists between the genders of teachers regarding their response to children with ADHD is confirmed.

4.2.4 The relationship between the variable of age and the perception of children with ADHD.

Reiteration of hypothesis number 3.2

“There will be no relationship between the age of the teacher and their perceptions of ADHD children.”

Here we want to establish whether the teachers' age have a bearing on their perception.

Table 4.5 Teachers' variable of age and perception (N =103).

Ages	Perceptions	
	Below	Above
20 – 29 yrs	18	1
30 – 39 yrs	40	6
40 + yrs	30	8

Chi ² = 2.69 df = 2 p > 0.05

The original questionnaire had seven age levels. For purposes of analysis, adjacent cells were collapsed so that expected frequencies could be greater than 5.

The value obtained on the Chi-square analysis of 2.69 at df = 2 on the 0.05 level of significance is not significant, as a result, the null hypothesis (Ho) is

supported. Ninety percent of scores falling below the mean and 5% above the mean were obtained from teachers between the ages of 20 and 29 years. Eighty seven percent of scores below the mean and 13% above the mean were obtained from teachers between the ages of 30 and 39 years, while 79% of scores below the mean and 21% above the mean related to teachers 40 years and older. We therefore conclude that there is no relationship between teachers' age and their perception of children with ADHD.

4.2.5 The relationship between the variable of type of school and perception of children with ADHD.

Reiteration of Hypothesis number 3.3

“There will be no relationship between teachers from public and private schools and their perceptions of ADHD children”

Here we want to establish whether teachers’ views of ADHD children from public and private schools differ.

Table 4.6 Teachers’ variable of type of school and perception (N =103).

Types of schools	Perceptions	
	Below	Above
Public	59	7
Private	29	8

Chi ² = 2.31

df = 1

p > 0.05

Table 4.6 shows the response of 66 teachers in public schools and 37 teachers in private schools to this study.

The obtained Chi-square value of 2.31 at df =1 is not significant at the 0.05 level of significance. A score of eighty nine percent obtained from public

school teachers fell below the mean and 11% above the mean. Private school teachers' scores comprised of 78% above the mean and 22% below the mean. Since $p > 0.05$ at $df = 1$, the null hypothesis (H_0) is accepted and the alternate (H_1) rejected.

The results in Table 4.6 shows that teachers from both types of schools are negatively disposed toward children with ADHD, thus confirming the hypothesis that no difference exists between teachers from the two types of schools.

4.2.6 The relationship between the variable of experience and the perception of children with ADHD.

Reiteration of hypothesis number 3.4

“There will be no relationship between the teachers years of teaching experience and their perceptions of ADHD children.”

We want to determine whether teachers with more years of experience in terms of number of years taught will have an impact on their perception toward children with ADHD.

Table 4.7 Relationship between teachers’ experience and perception

Teaching Experience	Perceptions	
	Below	Above
0 – 8 yrs	23	1
9 – 15 yrs	38	7
16 + yrs	27	7

Chi ² = 3.11

df = 2

p > 0.05

The original questionnaire had six levels of teaching experience. For the purposes of analysis, adjacent cells were collapsed so that expected frequencies could be greater than 5.

Table 4.7 shows the responses of teachers to children with ADHD in relation to the years of teaching experience.

The obtained Chi-square value of 3.11 at $df = 2$ is not significant at the 0.05 level of significance. Teachers with 0 to 8 years teaching experience obtained scores of 96% falling below the mean and 4% of scores above the mean. Teachers with 9 to 15 years teaching experience obtained scores of 84% below the mean and 16% above the mean. Teachers with more than 16 years experience obtained scores that comprised 79% below the mean and 21% above the mean. These differences are not significant and can be concluded that there is no relationship between years of experience and perception. Based on the above results, we accept the null hypothesis (H_0) and reject the alternate (H_1). As a result, the hypothesis is confirmed.

4.2.7 The relationship between the variable of qualification and the perception of children with ADHD.

Reiteration of hypothesis number 3.5

“There will be no relationship between the qualifications of teachers’ and perceptions of ADHD children”

The objective here is to determine whether those teachers who have additional knowledge of Special Education, differ in their views from teachers without such qualifications regarding children with ADHD.

Table 4.8 Teachers' variable of qualification and perception (N =103).

Knowledge	Perceptions	
	Below	Above
Teachers without Special Education	57	15
Teachers with Special Education	30	1
Chi ² = 5.12	df = 1	p < 0.05

Table 4.8 reflects the responses of 72 teachers with only Teaching diplomas/degrees and 31 teachers with an added Special Education qualification.

The value obtained for the Chi-square analysis is 5.12 at df =1 which is significant at the 0.05 level of significance. The above table indicates that only 3 percent of teachers that hold Special Education qualifications are more accepting of the behaviours of children with ADHD, compared to the 21 percent of those teachers without such qualifications. We conclude that teachers do differ in their views or perceptions of these children. We therefore reject the null hypothesis (Ho) and the alternative is upheld. As a result, hypothesis 3 is not confirmed.

4.3 CONCLUSION

School teachers' responses to the characteristic and social behaviours of ADHD children with and without the use of Ritalin, were examined in this study. The following aims were investigated:

- 1) To find out how teachers perceive (view) the characteristic behaviours of ADHD children before and after the administering of Ritalin
- 2) To find out how teachers view the social interactions of ADHD children before and after the administering of Ritalin
- 3) To determine the relationship, if any, between perceptions of ADHD children and the following teachers' characteristics: (i) age; (ii) gender; (iii) type of school taught; (iv) knowledge regarding ADHD; (v) teaching experience.

The results of the statistical analyses show that there is a significant difference between teachers' views of behaviours of ADHD children, before and after Ritalin was administered.

There appears to be no association between the teachers' variables regarding their age, gender, type of school they teach in, their qualifications and experiences, nor their views of ADHD children. Chapter Five will discuss the results of the study, make recommendations and offer suggestions for future avenues of research.

CHAPTER FIVE

1. SUMMARY, DISCUSSION OF RESULTS AND RECOMMENDATIONS

5.1 Summary of Study

This study was designed to investigate teachers' perceptions of children with Attention Deficit Hyperactivity Disorder and the effects of Ritalin, i.e., whether teachers have positive perceptions, negative perceptions or show indifference toward children with ADHD.

5.1.1 The aims of the study were:

- 5.1.1.1 To find out how teachers perceive (view) the characteristic behaviours of ADHD children, before and after the administering of Ritalin
- 5.1.1.2 To find out how teachers view the social interactions of ADHD children, before and after the administering of Ritalin
- 5.1.1.3 To determine the relationship, if any, between perceptions of ADHD children and the following teachers' characteristics:
 - (vi) age
 - (vii) gender

- (viii) type of school taught
- (ix) teaching experience
- (x) teacher qualifications

5.1.2 The following hypothesis fulfil the aims of the study:

- 5.1.2.1 Teachers will not perceive differently, the characteristic behaviour of ADHD children with /without the effects of Ritalin.
- 5.1.2.2 Teachers will not perceive differently, the social interaction of ADHD children with /without the effects of Ritalin
- 5.1.2.3 There will be no relationship between teachers' perceptions of ADHD children and the following teachers' characteristics:
 - (vi) gender
 - (vii) age
 - (viii) type of school
 - (ix) teaching experience
 - (x) qualifications

5.1.3 Methodology

Chapter One consists of the Statement of the Problem and the Motivation for the investigation in this area. Chapter Two consists of a literature review of previous work done in this field. Chapter Three clarifies the type of study used in this research. The writer has standardised the measuring instrument used, which consisted of a four-point Likert-type scale. The

analysis of data was done in Chapter Four and the summary, limitations and recommendations were made in Chapter Five.

5.2 DISCUSSION OF RESULTS

5.2.1 Findings with regard to aim number one: To find out how teachers perceive (view) the characteristic behaviours of ADHD children, before and after the administering of Ritalin.

The current study investigated teachers' views of the characteristic behaviours of ADHD children before and after Ritalin. The research instrument was a teacher rating scale assessing how teachers observed these behaviours before and after Ritalin. The responses in the current study of teachers' views before Ritalin, suggested that teachers observed those characteristic behaviours in these children to be symptomatic of ADHD. This finding is supported by previous studies. Charles, et al., (1979: 412) stated that ratings on observations were subjective and based on the teachers' perceptions of appropriate expectations and impressions. The results also reflects Livingston's (1997: 9) findings which indicate that the teachers' experience of the child's distractibility, forgetfulness and fidgetiness, is seen as intolerable, thus giving them a high score, indicating an ADHD prevalence. Cook (2001: 1) views are in line with the findings in the current study, that teachers' perceptions of children with disabilities are developed by their exposure to the severity and obviousness of the disorder.

In comparison to the above findings, teachers' views of the characteristic behaviours of children with ADHD, after Ritalin was administered, found that teachers supported the use of Ritalin, since their ratings indicated a drastic improvement in the child's behaviour, suggesting that they met with teacher appropriateness and acceptability. Results from studies done by Barkley and Cunningham (DuPaul&Barkley, 1991:206), relate well to the current study, indicating the positive effects of stimulant medication on attention and the ability to control behaviour. McFarland, et al.,(1995: 599) and Pelham Jnr. (1993: 201) in their studies, suggest that Ritalin does not only improve classroom behaviour but also academic performance.

Teachers may promote Ritalin as suggested in the 'Statement of the Problem' in Chapter One. With reference to our current mainstream educational environment where barriers to learning are created by large pupil-teacher ratios and poor teacher resources, teachers may opt for the medicating of children with behaviour problems in order to cope with the demands of teaching, thus producing a favourable outcome. According to Charles et al., (1979:413) teachers are more sensitive in their ratings when children are on stimulant medication, indicating that teachers' ratings are less suggestive of ADHD type behaviours.

5.2.2 Findings with regard to aim number two: To find out how teachers view the social interactions of ADHD children, before and after the administering of Ritalin.

The current study investigated teachers' views of the social behaviours of ADHD children before and after Ritalin. The research instrument used was a teacher rating scale assessing how teachers observed these behaviours. The average response obtained from the current study suggested that, even though teachers' observations of social behaviour before Ritalin was symptomatic of ADHD, it was not significant enough to indicate a overall concern by teachers, but instead, implied an indifferent attitude. It seems that even though some teachers still find these behaviours socially problematic, almost half do not see these children as intrusive. Reasons for this are best explained in studies done by Barkley (1990: 544), who identifies this group as the *socially rejected or the socially withdrawn*. Those children who are neglected are those ADHD children without hyperactivity. They appear anxious and depressed and withdraw by isolating themselves from others. Those children who are rejected, are the ones with ADHD, being disruptive and aggressive and are often turned away from play groups and tend to play with others with similar problems.

Relating to the above findings, the views of teachers' on social behaviour of children with ADHD, after Ritalin was administered, indicated that they were extremely supportive of Ritalin as an all round intervention, even though approximately half of the respondents found the social interactions of ADHD children not to be of significant concern, as discussed above. As

per the definition of ADHD, in order for a diagnosis to be made, the symptomatic behaviour needed to be present in more than one environmental setting. Therefore, it seems strange than, for this type of behaviour not to be observable to the extent of it being troublesome in peer settings as it was in the classroom, as identified by Breggin and Breggin (1995: 57), who argue the validity of an ADHD diagnosis made on the prevalence and severity of symptoms occurring in some situations and not in others. Glass and Wegar's (2000: 415) argument that medicating these children with stimulants is not necessary, but merely done to fulfil a social need, can be related to the views of half the respondents of the current study, who also do not see any problems of the social interactions before Ritalin.

5.2.3 Findings with regard to aim number three: To determine the relationship if any between the teachers' characteristics and their perceptions of ADHD children.

No differences were found between the types of schools in which teachers taught and their views on children with ADHD. Teachers from public schools, given their great pupil/teacher ratio, were expected to have a higher stress rate and low tolerance for hyperactive children compared to teachers with smaller classes. However, this was not the case since the same result was found in both types of schools. Glass and Wegar (2000:416), suggest that smaller classes in private schools were particularly sought after to cater for children with ADHD type and other

academic problems. In this study, the speciality of the school could still not change the perceptions of the teachers.

Since there were no significant differences between the responses obtained from male and female teachers, it indicates that the perceptions of ADHD children are generally human and not influenced merely by one's gender. According to Sibaya (1984:77), a person's early childhood experiences are more influential regarding his outlook on life than his biological makeup.

The idea that the teacher's knowledge supplemented with knowledge of ADHD would create a better understanding and outlook on children with ADHD was disappointingly inaccurate regarding this study. Teachers with knowledge of ADHD were found to be more intolerant and critical of these children in comparison with teachers without such qualifications. Perhaps as a result of their added knowledge, causing them to be hyper vigilant to such characteristic behaviour. Sibaya's (1984:77) explanation that even though education can modify attitudes, that it cannot completely change ones views on life, seems more fitting.

In this study, teachers' years of experience seemed not to effect their perceptions of ADHD children, which may be due to their preconception of the disorder. There was an expectation that teachers with many years of

experience would automatically have an abundance of resources to manage and especially, tolerate children with ADHD. This was not proven in this study. A suggestion for the result found in this study may be related to studies in Greene (2002: 2) in Chapter Two, implying that the demands made by children with ADHD type behaviours, causes stress in teachers and leads to adverse teacher perceptions of the disorder. As a result, teachers become stressful despite their years of experience. The results of the current study indicate that age and years of experience played no significant part, since both groups were negatively disposed toward children with ADHD. The findings in this study, certainly does not correspond with findings from the Glass (2001) research that emphasise that older, more experienced teachers should be more flexible and more positive, compared to their younger counterparts. Livingston's (1997: 14) view suggests that in a well, established educational environment, teachers find it difficult to be flexible since the traditional methods of behaviour control (punishment) no longer is an option. As a result, many teachers may look to Ritalin as a worthy substitute.

5.3 Recommendations

Valuable insight has been obtained from the current study into how children with ADHD children are perceived by teachers. Cook's (2001: 14) research on the inclusion of learners with obvious and hidden disabilities into mainstream education emphasised some salient steps to take into account when including children. He based his recommendations on his findings, which revealed the lack of knowledge that teachers have on various disabilities and their low tolerance levels, which leads to rejection and blame placed on children with disabilities to the extent where their academic and emotional outcomes suffer. His suggestions can benefit the South African Education System, with inclusion still in an experimental stage. Cook, in his need to make the educational authorities aware of creating a fair and functional learning environment for the disabled child, puts forward certain requests. These are, that children with hidden disabilities (ADHD and learning disabilities) be screened for behaviour in conjunction with the teacher's minimal tolerance levels for such behaviours and for special educators to assist general teachers with behaviour management techniques.

5.3.1 Teacher education programs are crucial in providing teachers with knowledge and instructional competencies. All relevant and appropriate education programs should be provided to all in-service and pre-service teachers.

- 5.3.2 Teachers, who find their children with ADHD to have severe characteristic traits, should examine their teaching methods and look for creative and flexible styles of instruction. Moving away from rigid disciplining and allowing children, especially ADHD children in the classroom, to move around freely and be given hands on participation in activities, will benefit the child regarding learning and create a less monotonous school day (Glass & Weagar, 2000:417).
- 5.3.3 All teachers, despite their age or years of experience, need to be flexible in their teaching methods. They need to find strategies that will accommodate the child's needs.
- 5.3.4 School administrators must evaluate teacher competencies related to teaching children with special education needs and provide the teacher with relevant information and support.
- 5.3.5 Teachers need to do more than identify an ADHD child. Identifying situations that trigger the unwanted behaviour can help the teacher to develop effective behaviour management strategies that can counter such behaviour.
- 5.3.6 The current study has shown that teacher attitudes and characteristics can influence their interactions with children who have ADHD. A valid and reliable measuring instrument should be developed to measure these influences so that statistical data can be provided to assist with empirical information.

5.3.7 Buchaoff (McFarland et al., 1995:601) claims that the ADHD child's disruption and disorganisation in his/her educational tasks, needs the teacher to be positive about helping him/her, by organising the work program and by providing positive role models in other children for the ADHD child to interact with.

5.3.8 Teachers who lack experience and tolerance may be upset by, and hostile towards, disruptive children with ADHD, thus causing a reciprocal effect of frustration and disruption. Teachers need to have specific rules and clear directions regarding classroom behaviour and they need to act immediately and firmly on misbehaviour in the manner they specified and not in anger or ridicule (McFarland et. al., 1995:602).

5.4 AVENUES FOR FUTURE RESEARCH

5.4.1 Although it is known that teachers play a very important role in the diagnosis of ADHD, very little is done in South Africa to find out that, if teachers' behaviour expectations are not met, would it lead to a diagnosis of ADHD (Greene, 1995: 7).

5.4.2 Literature obtained for this study was extremely limited, which may be largely due to the sensitivity of the subject. Information was scarce regarding teacher variables.

5.4.3 It is considered that assessments and intervention programs of ADHD children can greatly improve if more is known about teacher characteristics in relation to these children. Teachers and educational bodies appear to be resistant, due to the sensitive nature of the study.

5.4.4 Most of the literature obtained for the study, contained international content. The South African database was vague and seemed to lack similar research.

5.5 CONCLUSION

It has been gathered from the literature review, that a great deal of controversy exists over the existence of ADHD, based on the ratings used and the use of Ritalin as an intervention. Children are diagnosed with the disorder based on ratings completed by parents, teachers or both. A diagnosis of ADHD is assessed by those ratings based on the rater's experience with that particular child at that point in time, which is subjective and forgone conclusions drawn from those experiences. While researchers, physicians, educators and parents are debating these problems, millions of children in schools, globally, are receiving medication for a disorder that was diagnosed, based on subject ratings. The limitations to relevant research regarding teachers' perceptions in this field was perhaps due to the sensitive nature of asking teachers to be honest with their perceptions. This study's findings indicate that teachers need to

open themselves up to knowledge and tolerance of children with a variety of academic, social and emotional needs in order for the inclusion of special children to succeed. The limitations of this study further stress the need for future research to be done in this field. For fear of ADHD reaching dramatic proportions in South Africa, our society needs to take responsibility for its children and to provide an education and social system that can fulfil their needs through tolerance and acceptance. In having the advantage of learning from the experiences of other countries, we can prevent certain shortcomings that may hinder Inclusion in South Africa.

*“The beliefs of school personnel can be a conservative force that impedes or obstructs change; teacher beliefs about the value of disability and professional responsibilities correlate with teaching practices in serving children who are disabled, **teachers** need more than high levels of personal, interpersonal and creative abilities; they must also be receptive to the principles and demands of inclusion. Hence, the optimal implementation of inclusion requires not only a change in school policy but a change in beliefs of those who work in schools”*
(Brantlinger, 1996)

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ANNEXTURE A

Mrs P. G. Govender

P.O.Box 72172
PARKVIEW
2122

THE PRINCIPAL

Dear Sir / Madam

Re : Permission to conduct research

As per our telephonic discussion, I hereby enclose the questionnaires for completion by your staff.

To re-iterate: I am currently conducting a study on teachers' views regarding the effects of Ritalin on children with Attention Deficit Hyperactivity Disorder. My study includes children between the ages of 7 to 15 years.

Please convey the following to Staff before commencing:

- Please explain reasons for this research as discussed with you.
- Respond to the questions as per the instructions.
- Emphasise that confidentiality will be observed.

Thank you for assisting me in this endeavour.

Yours truly

Premi. G. Govender
(011) 467-3501.

_____ (permission granted to include in survey)
The Principal

*Please note that all questionnaires will be collected by myself on: _____

ANNEXTURE B

Teacher Rating Scale
ADHD rating scale with the use of Ritalin

Child's Name _____ Age _____

Grade _____

Completed by _____

Tick in the *one* column which best describes the child with **Attention Deficit Hyperactivity Disorder**.

Have one particular child in mind when filling out this checklist.

	NOT AT ALL	JUST A LITTLE	PRETTY MUCH	VERY MUCH
1. Often fidgets.				
2. Has difficulty remaining seated.				
3. Is easily distracted.				
4. Often blurts out answers to questions.				
5. Has difficulty sustaining attention to tasks.				
6. Often shifts from one uncompleted task to the next.				
7. Often forgetful in daily activities.				
8. Has difficulty playing quietly.				
9. Often talks excessively.				
10. Has difficulty following instructions				
11. Overly suspicious of Others.				
12. Lacks compassion when others are hurt.				
13. Poor judgement of other people's reactions or feelings.				
14. Overly intrusive.				
15. Overly annoying.				
16. Often rejected by peers.				
17. Unpopular amongst peers.				

ANNEXTURE C

Teacher Rating Scale
ADHD rating scale without the use of Ritalin

Child's Name _____ Age _____

Grade _____

Completed by _____

Tick in the *one* column which best describes the child with **Attention Deficit Hyperactivity Disorder**.

*Have **one** particular child in mind when filling out this checklist.*

	NOT AT ALL	JUST A LITTLE	PRETTY MUCH	VERY MUCH
1. Often fidgets.				
2. Has difficulty remaining seated.				
3. Is easily distracted.				
4. Often blurts out answers to questions.				
5. Has difficulty sustaining attention to tasks.				
6. Often shifts from one uncompleted task to the next.				
7. Often forgetful in daily activities.				
8. Has difficulty playing quietly.				
9. Often talks excessively.				
10. Has difficulty following instructions				
11. Overly suspicious of Others.				
12. Lacks compassion when others are hurt.				
13. Poor judgement of other people's reactions or feelings.				
14. Overly intrusive.				
15. Overly annoying.				
16. Often rejected by peers.				
17. Unpopular amongst peers.				

ANNEXTURE D

a. Biographical Data

Please tick in the appropriate column.

Independent Variables	Response
Type of school currently teaching at	
Public School	
Private School	
Gender	
Male	
Female	
Age	
20-25	
26-29	
30-34	
35-39	
40-49	
50-59	
60+	
Level of Qualification	
Teaching Diploma/Degree	
Teaching Diploma/Degree plus knowledge of Special Education	
Teaching Experience	
0-4 years	
5-8 years	
9-12 years	
13-15 years	
16-19 years	
20+ years	

ANNEXTURE E

Ritalin BEFORE

Resp	Teacher Distribution					Questions Before Ritalin										Questions Before Ritalin									
No. #	Age	Gender	Type of School	Knowledge	Experience	1	2	3	4	5	6	7	8	9	10	Total	11	12	13	14	15	16	17	total	Total 1 + Total 2
1	6	2	1	2	6	1	1	1	2	1	2	1	2	1	1		3	4	2	2	3	2	2		
2	6	2	1	2	5	2	3	2	4	1	2	1	4	3	1		4	4	4	4	4	3	4		
3	5	2	1	2	6	1	1	1	1	1	1	1	1	1	2		3	4	3	3	3	3	3		
4	5	2	1	2	5	2	1	1	2	1	1	1	1	1	1		1	2	2	2	2	2	2		
5	5	2	1	1	4	1	1	1	1	1	1	1	1	1	1		1	4	3	2	2	2	2		
6	6	2	1	1	6	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1		
7	2	2	1	1	1	1	3	2	1	2	4	3	1	1	3		2	2	2	2	2	1	2		
8	1	2	1	1	1	1	1	1	1	1	1	2	1	1	2		3	3	3	2	2	3	3		
9	1	2	1	1	1	1	2	1	1	1	2	1	2	1	1		1	3	2	3	2	4	4		
10	4	2	1	2	4	2	1	1	1	1	2	1	1	1	1		2	2	2	1	1	1	2		
11	5	2	1	1	2	1	2	1	1	1	2	2	1	2	1		2	1	2	2	2	2	2		
12	2	2	1	1	2	1	1	2	1	2	2	1	1	2	2		3	2	2	1	2	3	3		
13	3	2	1	1	2	1	1	1	1	1	1	1	1	1	1		3	4	3	2	2	2	3		
14	3	2	1	1	2	1	1	1	2	1	2	2	2	2	2		3	3	3	3	3	4	4		
15	7	2	1	2	6	1	1	1	1	1	1	1	1	1	1		3	2	3	2	1	2	2		
16	7	2	1	2	6	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1	1	1		
17	2	2	1	1	2	3	4	1	3	1	1	1	3	3	2		3	3	3	3	3	3	3		
18	3	2	1	1	3	2	2	1	1	2	3	3	2	1	3		2	2	1	1	1	3	3		
19	4	2	1	1	1	1	1	1	1	1	1	1	1	1	1		3	2	1	1	1	1	1		
20	2	2	1	1	1	1	1	2	2	1	3	3	2	4	2		2	3	3	3	2	2	1		
21	3	2	1	1	3	2	3	1	3	1	1	1	3	4	2		4	4	4	4	3	4	4		

22	3	2	1	2	4	1	1	1	1	1	1	2	1	2	2	3	3	4	2	2	2	3
23	3	2	1	2	3	1	2	2	2	3	1	3	3	2	3	2	1	2	2	1	3	2
24	5	2	1	2	6	1	1	1	2	1	1	1	1	2	2	4	4	2	3	3	4	4
25	3	2	1	2	3	1	2	1	1	1	1	2	1	1	2	2	4	3	2	2	2	3
26	4	2	1	1	4	1	2	1	2	1	1	1	2	3	1	3	1	1	1	2	2	2
27	6	2	1	1	6	2	2	2	3	2	3	2	2	2	2	4	4	4	3	3	4	4
28	6	1	1	1	6	2	2	2	2	2	2	2	2	1	2	3	3	2	2	1	2	2
29	3	2	1	1	3	1	1	1	2	1	1	1	1	1	1	3	3	3	2	2	2	2
30	7	2	1	2	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4
31	2	2	1	1	2	1	1	1	2	1	2	2	1	2	1	3	4	2	3	3	2	2
32	5	2	1	2	5	2	1	1	2	1	2	1	1	2	1	3	2	2	1	1	1	2
33	2	2	1	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
34	6	2	1	2	6	1	3	1	3	2	2	4	3	2	1	3	2	2	3	3	3	3
35	4	2	1	1	5	2	3	2	3	1	2	2	2	2	2	3	3	3	4	3	3	3
36	1	2	1	1	1	1	1	1	2	1	2	2	2	2	1	2	1	2	1	1	1	1
37	7	2	1	1	6	1	1	1	2	1	1	2	1	1	2	2	3	2	1	1	1	1
38	2	1	2	1	1	1	2	2	1	2	4	2	1	1	2	1	2	2	2	2	2	2
39	3	2	1	1	3	1	1	1	1	1	1	1	1	1	1	3	2	1	1	2	2	2
40	5	2	1	1	5	2	1	1	1	1	1	2	1	1	1	1	1	2	2	2	2	2
41	2	1	1	1	1	1	1	2	1	1	3	2	1	2	2	2	1	1	2	1	3	4
42	7	2	1	1	6	1	1	1	2	1	1	2	1	1	2	2	3	2	1	1	1	1
43	7	2	1	2	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	4
44	3	2	1	1	2	1	1	1	2	1	2	2	2	2	2	3	3	3	3	3	4	4
45	2	1	1	2	2	1	1	1	1	1	2	2	1	2	2	2	1	1	2	1	3	3
46	1	2	1	1	1	1	1	1	2	1	2	1	2	2	1	2	1	1	1	1	1	1
47	4	2	1	1	4	2	1	1	1	1	1	2	1	1	2	1	1	1	2	2	2	2

48	1	2	1	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	2	2	1	1	1		
49	4	2	1	2	4	1	2	1	2	1	2	2	1	1	2		3	4	3	2	2	2	3		
50	4	2	1	1	3	1	1	1	1	1	1	2	2	2	2		1	4	3	2	2	2	2		
51	5	2	1	1	5	1	1	1	2	2	3	2	2	2	2		4	4	3	3	3	4	4		
52	5	2	1	1	4	2	2	2	3	1	2	1	4	2	2		4	4	4	3	4	3	4		
53	4	1	1	2	4	2	1	1	1	1	2	3	2	1	3		2	2	1	1	1	2	3		
54	2	2	1	2	2	1	2	1	1	1	1	1	2	1	1		1	2	2	3	2	4	4		
55	4	2	1	1	4	1	1	1	1	1	1	1	1	1	1		2	2	3	2	2	2	2		
56	5	2	1	1	6	1	1	1	1	1	1	1	1	1	1		3	3	3	3	3	3	3		
57	6	2	1	2	6	1	1	1	1	1	1	1	1	1	2		4	4	2	3	2	4	4		
58	5	2	1	1	6	2	2	2	2	1	2	2	2	2	2		3	3	3	4	3	3	4		
59	5	2	1	1	5	1	1	1	1	1	2	1	1	1	1		2	4	2	2	2	2	2		
60	3	2	1	1	3	2	1	1	1	1	1	1	1	2	1		2	2	2	1	1	1	2		
61	7	2	1	1	6	1	1	1	1	1	1	1	1	1	1		1	1	2	1	1	2	2		
62	2	2	1	2	2	1	1	1	1	1	1	1	1	1	2		2	2	2	2	2	3	3		
63	5	2	1	2	5	1	1	1	1	1	1	1	2	3	2		2	1	1	1	1	2	2		
64	7	2	1	2	6	1	1	1	1	1	1	2	1	1	1		1	1	1	2	2	2	2		
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ANNEXTURE F

Ritalin AFTER

							A I M 3																						
Resp	Teacher Distribution						Questions After Ritalin										Questions After Ritalin												
	No. #	Age	Gender	Type Of School	Knowledge	Experience	1	2	3	4	5	6	7	8	9	10	Total	11	12	13	14	15	16	17	Total	Total 1 + Total 2			
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