THE ISSUES AND CHALLENGES THAT FOUNDATION PHASE EDUCATORS EXPERIENCE WHEN TEACHING LEARNERS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD)

By

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- Last, but not least, to our Heavenly Father "who is able to do exceedingly abundantly above all that we can ask or think".

DEDICATION

This study is dedicated to my daughter Merissa and my son Mikhail.

Desiderata – by Max Ehrmann

Go placidly amid the noise and haste, and remember what peace there may be in silence.
As far as possible, without surrender be on good terms with all persons.

Speak your truth quietly and clearly; and listen to others, even to the dull and the ignorant, they too have their own story.

Avoid loud and aggressive persons; they are vexations to the spirit.

If you compare yourself to others, you may become vain or bitter; for always there will be greater and lesser persons than yourself.

Enjoy your achievements as well as your plans. Keep interested in your own career, however humble; it is a real possession in the changing fortunes of time

Exercise caution in your business affairs, for the world is full of trickery. But let not this blind you to what virtue there is; many persons strive for high ideals, and everywhere life is full of heroism.

Be yourself. Especially do not feign affection. Neither be cynical about love; for in the face of all aridity and disenchantment it is as perennial as the grass. Take kindly the counsel of the years, gracefully surrendering the things of youth.

Nurture strength of spirit to shield you in sudden misfortune. But do not distress yourself with dark imaginings. Many fears are born of fatigue and loneliness.

Beyond a wholesome discipline, be gentle with yourself. You are a child of the Universe, no less than the trees and the stars; you have a right to be here. And whether or not it is clear to you; no doubt the universe is unfolding as it should.

Therefore, be at peace with God, whatever you conceive him to be, and whatever your labours and aspirations in the noisy confusion of life, keep peace in your soul. With all it's sham drudgery and broken dreams; it is still a beautiful world. Be cheerful. Strive to be happy.

DECLARATION

I hereby declare that the work on *"Issues and challenges that Foundation Phase educators experience when teaching learners diagnosed with Attention-Deficit Hyperactivity Disorder"* is my own work – both in conception and execution – and, it has not been submitted for any degree or examination in any university, and that all the sources I have used or quoted have been adequately indicated and acknowledged by means of a complete reference.

_____ **_____/_____/_____**

MERYL LAWRENCE **DATE**

ABSTRACT

The purpose of this study was to investigate the experiences of mainstream foundation phase educators who teach learners diagnosed with Attention Deficit Hyperactivity Disorder (ADHD), as well as to understand the intervention strategies that these educators use when dealing with these learners.

The study is qualitative and based on the interpretivist paradigm. It is a case study of seven mainstream educators who were all teaching learners that were diagnosed with ADHD. The study was guided by the following research questions:

- What are the experiences of mainstream educators who teach learners diagnosed with ADHD?
- What intervention strategies do educators employ to handle learners with ADHD?
- What support structures exist in schools to assist educators of learners with ADHD?

The study reveals that the educators in these mainstream schools do not feel sufficiently skilled and effective in meeting the learning needs of their learners diagnosed with ADHD. Their large class groups, lack of available support structures, and lack of parental support and professional intervention, contribute largely to this situation. Drugs such as Ritalin may not be a cure, but are sometimes helpful in improving learner behaviour and productivity. This however is not always possible due to the varying array of symptoms that co-exist in ADHD and the effectiveness of medication and intervention is unique to each learner. Psychological assessment assists in highlighting the unique educational needs of these learners. Educators rely on the advice and support given by physicians and psychologists. Drug therapy must be used in conjunction with behaviour therapy as this is beneficial to the learner diagnosed with ADHD and to the class environment.

The findings of the study indicate the absence of remedial education in these mainstream schools. There is a need for all mainstream educators to become trained and skilled in understanding and teaching learners with ADHD. Greater awareness, involvement, coaching and support needs to be available for all those involved with ADHD. This implies that the provision of effective intervention and support will empower educators, potentially minimize the early drop out of learners affected with ADHD and facilitate a productive outcome and future for them.

A limitation of this study is that this small sample size does not reflect the education setting of all mainstream schools in South Africa. Mainstream schools vary extremely in degrees of resourcefulness and class size.

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KEYWORDS

- Attention Deficit Hyperactivity Disorder
- Educators
- Learners
- Mainstream Schools
- Inclusive Education
- Intervention Strategies

ABBREVIATIONS AND ACRONYMS

ADD	:	Attention Deficit Disorder
ADDERS	:	Attention Deficit/Hyperactivity Disorder Online information service
ADHD	:	Attention Deficit Hyperactivity Disorder
ADHASA	:	Attention Deficit and Hyperactive Support Group of South Africa
APA	:	American Psychiatric Assiciation
APJH	:	American Journal of Public Health
BD	:	Bipolar Disorder
DSM	:	Diagnostic and Statistical Manual of Mental Disorders
DoE	:	Department of Education
EWP 6	:	Education White Paper 6
LD	:	Learning Difficulty
MBD	:	Minimal Brain Damage
NCCAM	:	National Centre for Complementary and Alternative Medicine
NIMH	:	National Institute of Mental Health
NINDS	:	National Institute of Neurological Disorders and Stroke
NRC	:	National Resource Centre
OCD	:	Obsessive Compulsive Disorder
ODD	:	Oppositional Defiant Disorder
SSTs	:	School-based Support teams
TS	:	Tourette Syndrome
UNESCO	:	United Nations educational, Scientific and Cultural Organization
USAID/SA	:	The United States Agency for International development of South Africa

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CHAPTER ONE

INTRODUCTION

1. Introduction

> *"Does the combination of repeated failure in my earlier years without any continued period of success, missed opportunities to learn, and the battering taken by my sense of self-worth as I endeavored to keep up with my peers, account for much of my situation today or is it entirely constitutional? Is it most likely a tangled mixture of many forces, both external and internal* (Diller, 1998, p. 278).

The above quotation so aptly describes the dilemma that confronts learners with Attention Deficit Hyperactivity Disorder (ADHD) at school and creates a very real picture of education as seen through the eyes of one of these learners. While research has attributed the cause of ADHD as highly heritable and largely internal, one questions the role and effects of external factors in the lives of these learners. These factors always unravel in the classroom, and while challenging for learners who have been diagnosed with ADHD and their teachers, not much has been told of how these challenges are experienced by South African mainstream educators, and the intervention strategies and the coping skills they implement in order to manage these learners in over-crowded classrooms.

1.1 Background

The National Institute of Neurobiological Disorders and Stroke (NINDS) define Attention Deficit Hyperactivity Disorder (ADHD) as a neurobehavioural developmental disorder, which is characterized by differences in brain structure and function that affect behaviour, thoughts and emotions (CHADD, 2010). According to the National Institute of Mental Health ADHD accounts for more child mental health referrals than any other single disorder? ADHD is a developmental disorder of self-control, and consist of problems with attention, impulsivity and activity levels (Barkley, 2000).The Diagnostic and Statistical Manuel of Mental Disorders report that it affects 3 – 5% of children before the age of seven; (Kaplan & Sadock, 1995, p. 2295); the National Resource Centre on ADHD (NRC, 2010) suggests 5 – 8%; and Picton (2002) suggests 5 – 15% – approximately 5% of the child population depending on the methodology used. ADHD is characterized by a persistent pattern of impulsiveness and

inattention, with or without a component of hyperactivity. It is three times more common in boys than in girls (Swanberg, Passno & Larimore, 2003), or as other reports indicate; though studies suggest this discrepancy may be due to subjective bias.

ADHD is generally chronic in nature, where 30 – 50% of learners have symptoms continuing into adulthood. As learners mature, the activity levels in adolescence and adulthood may decline, but the other symptoms remain. Over time, adolescents and adults are sometimes able to draw from coping techniques that they have acquired, and may use these coping mechanisms to compensate for their impairment (Picton, 2002).

The National Institute of Mental Health (NIMH, 2008) has proposed methods of treatment which involve a combination of medications, behaviour modifications, and lifestyle changes and counselling; yet agreement on the underlying causes of ADHD or on how to treat the disorder remains controversial due to postulations with regards to the genetic and physiological triggers of the condition. This contradiction in opinion complicates the medicating and treatment of this disorder. Medical practitioners also differ in treating ADHD. Some clinicians support the use of stimulant medication; some prefer a combination of stimulant medication with behavioural therapy whilst others are against medication being used as a method for treating the disorder (Jones, 2000).

At school, children affected by ADHD look normal physically. Their physical appearance does not indicate the problem that exists in their central nervous system or brain (Barkley, 2000); however, they exhibit symptoms quite markedly in that they are impulsive, inattentive, and hyperactive (Barkley, 1994). Their behaviour is noticeable in that it is inconsistent with age-appropriate attention, impulse control and activity (Picton, 2002). Learners who have ADHD are distracted by external as well as internal stimuli. The activity is pervasive and is referred to as hyperactivity.

Hyperactivity affects the senses making concentration and the focusing on specific tasks difficult, as well as contributing to the constant ‘on the go’ movements, making these learners highly distracting in their own activities, as well as that of their peers (Kruger & Nel, 2005). This makes classroom discipline, control, and teaching a very demanding task for the educator, and for many learners with ADHD school can be a nightmare. At school, these learners may mask their problems by implementing coping techniques. For example, learners who cannot read may look at a picture and through memory recite a story, and in this way, mask their inability to read. These coping techniques become less effective as the school work becomes more demanding and often leaves a learner with ADHD frustrated and a very poor academic foundation (Picton, 2002).

Learners who have ADHD can be volatile, dangerous and intentionally annoy their peers, often showing little or no remorse for their actions. Though difficulties among these learners may vary they all result in poor social relationships, academic under-achievement, and a low self-image, and this could contribute to the learner being isolated in the classroom (Barkley, DuPaul & Murray, 1990).

ADHD is often accompanied by other learning impairments which may contribute to difficulties in keeping up with peers. Studies indicate that 80% of learners who have ADHD have problems with reading, spelling and writing, and that they under-achieve (DuPlessis & Strydom, 1999); that they have a developmental lag of 30% and that they often experience language difficulties (Barkley, 1994). As a result, they may experience repeated failure with little promise of success, which can be very frustrating and demotivating for these learners.

Furthermore, ADHD is frequently accompanied by one or more of the following psychiatric conditions, namely: Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), Mood Disorders (Depression, Dysthymic and Bipolar), Anxiety Disorders (Separation, Phobic, Generalized or Obsessive – compulsive), and can sometimes, though very rarely, be accompanied by Tic Disorders (Ingersoll, 1998), also known as Tourette's syndrome (Picton, 2002). If these learners are undiagnosed and untreated, these factors will impact negatively and severely on their lives (Barkley, DuPaul & Mc Murray, 1990).

The South African Department of Education supports a policy of inclusion for all learners in a document called Education White Paper 6. Special Needs Education: Building an Inclusive Education System (2001). This policy document recognizes the class teacher as the primary source for meeting the diverse learning needs of all their learners, including those who have ADHD (Donald, Lazarus & Lolwana, 1997). This is a difficult task for mainstream educators as the majority of educators are not trained or skilled to address the varied needs of many of their learners.

1.2 Significance of the study

The findings of the research would be useful to mainstream educators who:

- are experiencing difficulties with learners who are diagnosed with ADHD in their class and would like to become sufficiently skilled, effective and confident when dealing with ADHD learners in their school.
- desire to find effective intervention strategies for teaching learners who have ADHD and who are flexible in exploring other teacher's methods of intervention in an

endeavour to find teaching interventions that would promote effective learning for all and minimise class chaos and frustration in their classrooms.

- require support for their learners who are diagnosed with ADHD and are unsure what support is available and where and how they can acquire it.

1.2.1 Research problem

The focus and purpose of this study is to investigate the experiences of foundation phase educators who teach learners diagnosed with Attention Deficit Hyperactivity Disorder (ADHD).

1.2.2 Objectives

The study was guided by the following objectives:-

- To investigate educators' experiences of dealing with learners who have ADHD.
- To investigate educators' skills and readiness to teach learners with ADHD.
- To investigate the support structures that educators rely on when teaching learners with ADHD.

1.3 Critical questions:

- What are the experiences of mainstream educators who teach learners that are diagnosed with ADHD?
- What intervention strategies do educators employ to teach learners with ADHD?
- What support structures do educators rely on to support them with learners who have ADHD?

1.4 Rationale

I have been an educator for the past twenty years in three schools, two of which were previously classified as "Coloured Government Schools". Both of these "Coloured Government Schools" have become racially integrated, where the demographic profile of the learner population remains predominantly black, and where the majority of learners are drawn from primarily disadvantaged financial backgrounds. Both schools averaged 1,200 learners

on enrolment. One of the schools had three "adaptation classes" whose function it was to meet the academic needs of grade one to grade seven learners who were finding it difficult to cope with the workload in the regular mainstream school. If a learner failed the same grade twice, he/she was tested by the school psychologist, and depending on their Intelligence Quotient (IQ) scores, they were placed into the "special" or "adaptation" class, or sent away to a "special" school. If they were in the adaptation class and made satisfactory progress, they were absorbed into a regular mainstream class. As a result, "adaptation learners" were often much older than their peers.

A remedial class was also available in the mainstream school and provided support for learners who were experiencing difficulty in specific learning areas. These learners would leave their regular class and go to the remedial teacher for a remedial lesson in the learning area in which they were experiencing difficulties. These lessons were geared towards bridging any gaps in "problematic" learning areas. The remedial and adaptation classes in the aforementioned mainstream schools have since become redundant. This came about in 2001 when the policy of inclusive inclusion came into effect. This meant that class teachers were to meet the diverse learning needs of all learners, including the learners who had ADHD.

I am presently teaching in a semi-government school, which, in contrast to the other less privileged "Coloured Government Schools" mentioned above, caters specifically for learners with "Special Needs", including learners who have been diagnosed as having ADHD. The staff of this semi-government school is comprised of educators, an occupational therapist, a speech therapist and psychologists who cater for the needs of the learners in the school. A small percentage of the learners receive additional support and therapy outside of the school. The pupil / teacher ratio has dropped significantly in my class from 1:48 in the mainstream school to 1:14 in my pre-school class, and approximately 1:20 in the grades one, two and three. This ratio changes constantly in the latter grades as learners constantly withdraw from the class for individualized speech or occupational therapy, thereby creating even smaller class group sizes.

My interest in ADHD was triggered when I was exposed to two hyperactive learners and a mentally challenged learner in my mainstream classroom. This exposure, and my own feelings of frustration and difficulties in coping with these learners in a mainstream school environment, particularly from a resource and lack of support perspective, brought home to me the enormity of the challenges that faced both learners with ADHD and educators within these under-resourced environments.

Whilst my studies afforded me a greater insight and understanding into the disorder, I discovered that most of my colleagues in the mainstream schools also knew about the disorder, but none of our hyperactive learners had been assessed or clinically diagnosed with ADHD, and therefore, did not receive medication or therapy for this disorder. This undiagnosed and non-medicated situation placed a lot of stress on us as teachers, particularly when combined with the other challenges of over-crowded classrooms.

The focused presence of the hyperactive/impulsive behaviour in my classroom proved to be very tiresome for me as an educator. Coupled with this was the complication of my disadvantaged grade one classroom setting where the average learner population ranged between 45 to 50 learners in the mainstream foundation phase. The majority of learners did not have any formal pre-school education, they were not proficient in English, but were expected to understand, communicate, and interact with their educator and peers through English. An influx of Zulu-speaking learners into a school where the majority of educators were English- speaking with Afrikaans as their second language did not help in meeting the learners' language needs and made effective communication a difficult task.

It was difficult to determine the real reason for any hyperactive behaviour, particularly in grade one, as the language barrier would be a strong motivating cause for the poor concentration and distraction, especially among second-language pupils, and disorders like Attention Deficit Disorder, anxiety, nervousness, stress, heredity and toxins all cause hyperactive behaviour in children (Nilsen, 2009).

The institutionally allocated school psychologist was not in a position to assist, and as a rule, refused to administer testing to grade R or grade one learners. Allied to this set of significantly challenging facts is that the school psychologist is so inundated with work and does not have the available time to dedicate to the case studies, which is necessary to investigate learners who may have ADHD. Such an undertaking is far too time-consuming to be administered singularly.

At the same time, I found that the parents of these learners were generally reluctant to take their children to be assessed or to seek professional intervention, even when the behavioural manifestations of ADHD are evident and demonstrably exhausting for both parent/s and educator. Their reasons can only be surmised.

Given all of the above the researcher was challenged to research the topic of ADHD and discovered that while there is a lot of research done on this topic, this information did not help in alleviating the stress or feelings of inadequacy and loneliness that were experienced. A

study was necessary to understand the experiences of educators who were teaching in the same teaching environment, to explore the interventions that other educators were using and to investigate the support that was available for them and their learners who had ADHD.

1.5 Methodology

A qualitative case study methodology was employed to investigate the issues and challenges of 7 mainstream educators who teach learners with ADHD. Case studies aim to understand social situations through thick rich description (Denzin, 1998; Patton, 2002). They provide detail, context and emotion in social context and in thick description, the voices, feelings; actions and meanings of interacting individuals are heard (Denzin & Lincoln, 1998, p. 83).

The study provided detailed experiences of these mainstream educators who taught in the foundation phase of 3 previously classified Coloured Government Schools. The study is viewed from an interpretivist perspective and strives towards understanding and giving voice to the perspectives of seven mainstream educators who would otherwise be powerless (Maree, 2007).

According to most critics the case study as a methodology often lacks reliability. To eliminate this, the researcher checked the school records of the 3 schools to verify that the 7 learners taught by these educators were diagnosed by a medical practitioner as having ADHD. This would eliminate generalisations and self-diagnosis made by educators based upon the hyperactive or overactive behaviour of learners in the classroom. The seven participants were selected purposively in that they all were teaching a learner who was diagnosed with ADHD. The case study method was suitable and also convenient in that the researcher was teaching in one of these schools and had built relationships with the participants.

The data for the research were captured as *priori* themes which were helpful and necessary in understanding, interpreting and finding answers to the research question.

1.6 Summary

This chapter has introduced the study and provides an outline of the purpose and rationale for the study which was to understand the issues and challenges that mainstream educators experience when teaching learners with ADHD.

1.7 Outline of the chapters

Chapter One: This chapter has introduced the study, stated the problem, and outlined the purpose and rationale for the study. It also tables the methodology, research paradigm and methods used.

Chapter Two: Reviews literature on Attention Deficit Hyperactivity Disorder: the definition, symptoms, causes, diagnosis, assessment, treatment and the challenges ADHD present in mainstream schools. It also presents a theoretical framework that is relevant to this study.

Chapter Three: This chapter provides a description of the research methodology, the research instruments, and the procedures used to analyse the data.

Chapter Four: The research data is presented and the findings and results are analyzed.

Chapter Five: This chapter concludes the study by indicating the limitations, the implications and makes recommendations.

CHAPTER TWO

LITERATURE REVIEW

> *"By virtue of being born to humanity, every human being has a right to the development and fulfillment of his potentialities as a human being*."– [Ashley Montague, cited in Jordaan & Jordaan, 1989, p. 655]

2. Introduction

In 1994, The Salamanca World Conference on Special Needs reaffirmed a policy of inclusive education. The policy was non-discriminatory, effective in meeting the educational needs of most learners, efficient and cost effective. As a result many countries changed their existing education policies and adopted this inclusive education policy (Hick & Thomas, 2009). South Africa also adopted this inclusive education policy, and in a document referred to as Education White Paper 6 on Special Needs Education: Building an Inclusive Education and Training System, schools in South Africa were informed of their need to transform and become inclusive, and educators were identified as the primary source for this enablement. This meant that educators would need to improve their skills and knowledge in order to address the needs of their learners. Management and governance would revise programs that would orientate and train educators to identify and address barriers in learning (EWP6, 2001:19).

The United Nations Educational, Scientific and Cultural Organization (UNESCO), suggest numerous barriers that prevent the inclusion of learners in mainstream schools. The greatest barrier is the attitude of people towards inclusion rather and not as a result of medical impairments. Other barriers in inclusive education include; physical barriers that exclude learners, an inflexible and rigid curriculum, language and communication difficulties experienced by second language learners, poor socio-economic conditions, negative attitudes, a lack of teaching skills, a lack of funding, a shortage of qualified educators, the absence of support, the difficulty to monitor and ensure a quality service delivery and the exclusion of certain learners from mainstream education thereby prohibiting them of an equal education and future equal employment opportunities.

To create an inclusive and supportive classroom for a learner with ADHD, an educator would need to engage in changing attitudes, behaviour, teaching methods, curricula and the environment (EWP6, 2001:7). An inclusive education policy is based on the principle that learning disabilities arise from the education system rather than within the learner (EWP6, 2001: 12). Herein lies the difficulty in that a mainstream educator may make every effort to

create an inclusive environment for a learner with ADHD however, the specific barriers of inattention; impulsivity and poor concentration are experienced internally. In order to address the internal needs of the learner who has ADHD the educator is reliant on support structures, a combination of medication, behaviour modifications, lifestyle changes and counselling (NIMH, 2008). The effects of these internal barriers experienced by learners who have ADHD do not only affect the learner, but impact negatively on their peers and teacher as well (Donald, Lazarus & Lolwana, 2002).

By failing to provide supportive and inclusive environment, external "barriers to learning" are created (this refers to the inability of systems to accommodate diversity) and this results in ineffective teaching and learning from taking place (Department of Education, 1997 as cited in Kruger & Nel, 2005).

2.1 Terminology

Inclusion: A policy that ensures that the full variety of educational needs is optimally accommodated and "included" in a single education system (Donald *et al*, 2002, p. 11).

Paradigm: A typical example, pattern, or model of something. "A paradigm is a model that underlies the theories and practice of a scientific subject (Oxford Dictionary, 2002, p. 646).

Apartheid: The political policy that used to be followed in South Africa, of keeping Europeans and non–Europeans apart – an Afrikaans word meaning "being apart" (Oxford Dictionary, 2002).

Education White Paper 6: A Policy Document issued by the Department of Education in July 2001 addressing special needs education and training and outlines how to build an inclusive education system. A time-frame of twenty years was allowed for the implementation of inclusive education to be achieved (Kruger & Nel, 2005, p. 62).

Self–contained classroom: Refers to a class in the mainstream school where learners with disabilities receive instruction and support. This is similar to the special and remedial classes that were previously in use. The educators in charge of these classes are usually trained to provide special education (Kruger & Nel, 2005, p. 23).

Resource room: This is a classroom in a mainstream school that provides specialized instruction to individuals or groups of learners. These learners are 'pulled out' of their mainstream class for a part of the school day by a specially trained educator to receive special education (Kruger & Nel, 2005, p. 23).

Curriculum: "A broad term that covers both the content and the process of what takes place in education." It relates to the aims and purpose of the entire school programme and to how these are carried out. Apart from the content, the curriculum includes how the programme is structured, the processes and methods of teaching/learning, methods of assessment and evaluation, and a range of other factors that characterize the particular shape or form of the whole programme (Donald *et al*, 2002, pp. 4 & 11).

Special schools: Learners who require high-intensive educational support will be based in these schools (EWP6, 2001, p. 15).These schools offer specialized education to their learners. Learners are placed in these schools, or they can remain in mainstream schools if support can be given by experts from the district-based support team (Kruger & Nel, 2005, p. 66). A list of websites on special schools in South Africa can be found on: The South African Directory of Special Schools on: www.rainbownation.com

Mainstream schools: Also referred to as ordinary schools and they cater for learners in need of low intensity support (Kruger & Nel, 2005, p. 66).

Support structures/services: These include supportive help both from within the schools, as well as to schools in areas such as school health; social work, psychological and learning support, speech / hearing and physiotherapy, and occupational therapy, and from other community resources (Donald *et al*, 2002, p. 19).

School-based support teams: School-based Support teams (SST's) consist of the principal or their representative, a group of educators and members from the community. They meet regularly to discuss the needs and problems that teachers have referred to them and look for effective and preventative strategies and interventions that would be of assistance. The effectiveness of this team is based on regular and adequate consultations which allow for referral if and when necessary (Donald *et al*, 2002, p. 28).

2.2 Definition of ADHD

The "essential feature of Attention Deficit Hyperactivity Disorder is a persistent pattern of inattention and/or hyperactivity-impulsivity that is more frequently displayed and more severe than is typically observed in individuals at a comparable level of development" (DSM-IV-TR, 2000, p. 78).

This mental disorder evidences in children as inattentiveness, over-activity and impulsiveness. The current diagnostic label is ADHD (Attention Deficit Hyperactivity Disorder), but still

continues to be referred to by many as ADD (Attention Deficit Disorder), or ADHD (Attention Deficit Hyperactivity Disorder); the sole difference being the presence or absence of hyperactivity. These current names refer to the same condition which has been recognized and studied for over a century under different names (Kaplan & Sadock, 1995).

In the 1870's, the term ADHD was often referred to as Hyperkinesis, or Hyperkinetic Syndrome, which means "overactive" in Greek. The Classification of Diseases and Related Health Problems refers to ADHD as Hyperkinesis. Sometimes it is referred to as Minimal Brain Damage, Over-activity, Perceptual Deficit, Psycho-neurological Integration Deficit, Hyperactive Impulse Disorder, or Hyperactive Child Syndrome (Kaplan & Sadock, 1995).

Hyperactivity was a common behaviour in children between 1950 and 1960, and was associated with the mechanism of the brain, and was not necessarily the result of brain damage. In the 1960's the Freudian idea of dysfunctional parenting as the cause of hyperactivity was popular and treatment involved a combination of stimulant medication, psychotherapy and parent counseling. By 1970, the concept of MBD (Minimal Brain Damage) faded away, and in the 1980's, over-activity was no longer construed as important, and the focus was now on inattention and attention deficit (Diller, 1998). The DSM 111 classified this syndrome as Attention Deficit Disorder (ADD), with or without hyperactivity. If the child presented with the hyperactivity, he was said to have Attention Deficit Hyperactivity Disorder (Du Paul & Stoner, 2003).

Presently, the DSM-IV classifies ADHD as having three sub-types: a predominantly hyperactive-impulsive type, a predominantly inattentive type and a combined type. All three are classified as ADHD, even when the inattentive sub-type is predominant and hyperactive-impulsivity is not (Barkley, 2000).

The difference between ADD and ADHD is that learners who have ADD have difficulties with memory, perceptual-motor speed, and the speed at processing incoming information in the brain. Learners who have ADHD encounter problems like impulsivity, distractibility and over-activity. Both these learners perform poorly at school, however, the ADD learner fares better in their social skills while the learner with ADHD encounters problems which result from impulsivity and aggression, and this is directed towards their peers (Barkley, 2000). A diagnosis for ADHD would depend on the specific symptoms that are manifested. Using current terminology, a child who has ADD would be described diagnostically as having ADHD, predominantly the Inattentive Type (Du Paul & Stoner, 2003).

According to the DSM-IV, a child with ADD would need to exhibit at least six of the nine symptoms of the Inattentiveness Cluster, and for a child to have ADHD, at least eight of the (CHADD, 2010).

2.3 Diagnostic criteria of ADHD

The specific criteria for diagnosis from the DSM-IV are:

A. Either (1) or (2):

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

Inattention

a) Often fails to give close attention to details or makes careless mistakes in school work, work, or other activities;

b) Often has difficulty sustaining attention in tasks or play activities;

c) Often does not seem to listen when spoken to directly;

d) Often does not follow through on instructions and fails to finish school work, chores or duties in the workplace (not due to oppositional behaviour or failure to understand instructions);

e) Often has difficulty organizing tasks and activities;

f) Often avoids, dislikes, or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework);

g) Often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books or tools);

h) Is often easily distracted by extraneous stimuli; and

I) is often forgetful in daily activities (Swanberg, Passno & Larimore, 2003, p.129).

Or

2) Six or more of the following symptoms of hyperactivity-impulsivity have persisted for a period of at least six months, and these symptoms are maladaptive and inconsistent with the developmental level:

Hyperactivity

a) Often fidgets with hands or feet or squirms in seat;

b) Often leaves seat in classroom or in other situations in which remaining seated are expected;

c) Runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness);

d) Often has difficulty playing or engaging in leisure activities quietly;

e) Is often 'on the go', or acts as if 'driven by motor'; and

f) Often talks excessively (Swanberg *et al*, 2003, p. 129).

Impulsivity

a) Often blurts out answers before questions have been completed;

b) Often has difficulty waiting a turn; and

c) Often interrupts or intrudes on others (for example, butts into conversation or games).

B. The symptoms of hyperactivity, impulsivity or inattention need to have been present before the age of seven;

C. Some of the symptoms must be present in more than one setting (for example, at school, at work and at home);

D. There must be clear evidence of clinical impairment in social, academic or occupational functioning; and

E. The symptoms do not occur exclusively during the course of pervasive developmental disorder, schizophrenia or other psychotic disorder, and are not better accounted for by another mental disorder, for example, Mood Disorder, Anxiety Disorder, or a Personality Disorder (Swanberg *et al*, 2003, p. 130).

2.4 The prevalence of ADHD

Scientific and clinical interest in ADHD is increasing worldwide. Studies indicate a prevalence of 5.29% worldwide (Polanczyk, de Lima, Horta, Biederman & Rohde, 2007). There is an increase of ADHD diagnosis in the USA with a 700% increase in the production of Ritalin (Diller, 1998); while countries like Italy and Japan are unfamiliar with the ADHD diagnosis, and stimulant medication is unavailable in these countries (Ingersoll, 1998).

According to Polanczyk, a Brazilian researcher, the prevalence of ADHD is not a by-product of American culture, as some people believe. He also states that geography plays a limited role in the reasons for variable differences in the prevalence estimates worldwide (The American Journal of Psychiatry, 2007). Studies were made fairly recently across various geographic locations, namely, in Africa, Asia, Europe, the Middle East, North America, Oceania and South America. North America yielded a prevalence rate of 6.2%, Europe, 4.6%, Africa, 8.5% and South America, 11.8%. Jamaican children scored the highest, American children were average, and Japanese and Finnish children scored the lowest (Moffitt & Melchior, 2007.p. 857). Viable differences were noted between North America, Africa and the Middle East, and no difference was noted between Europe and North America. The variations were due to methodological characteristics of the studies made rather than linked to geographic location.

Factors that contribute to the variations in prevalence are the different instruments used to define ADHD. Some countries in Europe, for example, still use the ICD-10, while the majority of countries worldwide use the DSM-IV to define ADHD, even though a vast majority use the DSM-IV researchers themselves may apply the elements on the DSM-IV differently. The informants that are used in research may be the parents and/or the teacher and/or the subjects, and the scores for the assessment may be taken from the checklists or from the interviews (Taylor, 1997). Hyperactivity was also associated with low IQ, epilepsy and other disorders in the UK and not associated with brain damage in the USA (Jones, 2000).These factors all contribute to the variations in prevalence worldwide.

Very little is known about ADHD in South Africa. Research indicates that there are similarities in the prevalence of ADHD in African and Western countries however; there are officially no available statistics on ADHD in South Africa (Snyman & Truter, 2010).

2.5 The causes of ADHD

The exact causes are not yet known as there are no specific laboratory tests or x-rays to diagnose ADHD. What is identifiable is a variety of symptoms resulting from causal mechanisms and their effects (Barkley, 2000; Swanberg *et al,* 2003). Scientific evidence strongly suggests that hereditary and neuro-biological factors have received the greatest attention as etiological factors (Du Paul & Stoner, 2003). Approximately 40% of ADHD children have at least one of their parents with ADHD symptoms, 35% have an affected sibling, and 80 – 92% of identical twins are affected (Barkley, 2000). It may also result from pre-natal development, from complications that arise during child birth, or may evidence later in life as a result of neurological damage (Rief, 2005).

According to the National Institute of Mental Health (NIMH, 2008), ADHD was viewed as the presence of metabolic abnormalities in the brain, and they concluded that ADHD was a neurological disorder resulting from a deficiency in the chemicals, dopamine and norepinephrine. These two chemicals control behaviour and assist the brain in regulating these chemicals. Studies using magnetic resonance imaging (MRI) and position emission tomography (PET) were made. These imaging techniques indicate the differences and possible abnormalities in the fronto-striatal networks of the ADHD brain. They include the pre-frontal cortex, which is involved in the regulation of behaviour in response to environmental stimuli (Du Paul & Stoner, 2003).

Further investigations were made into brain differences where brain scan technology is used to view the size, symmetry, metabolism, and chemistry of ADHD individuals. Results from these investigations are not yet determined (www.Factbug.co.za).

Psycho stimulants like Ritalin assist the ADHD brain by regulating these chemical imbalances, thereby regulating behaviour. Diseases like thyroid and encephalitis are also probable causes that affect the brain and can often mimic the typical signs of ADHD (Picton, 2002). Environmental factors such as family stress, poor parenting, and dieting (Swanberg, Passno & Larimore, 2003) may increase and impact the severity of ADHD; however, they do not cause it (Du Paul & Stoner, 2003).

Some research suggest that diet influences ADHD and by eliminating artificial colourants and additives in food, ADHD can be cured. This gave rise to diets like The Feingold diet. Other diets eliminate foods like eggs, wheat and cows' milk from the ADHD diet. This has proved successful only in a small minority of hyperactive children (Taylor, 1997). While these treatments may prove helpful at times, evidence of their success is inconclusive (NIMH, 2008)

as they have not met with the necessary scientific criteria and tests (Ingersoll, 1998). Research indicates that only 5% of learners who are diagnosed with ADHD react to food additives and dyes (Flick, 1996). Investigations into the effects of sugar (sucrose) indicate that sugar does not affect learners who have ADHD; however, the effects of sugars found in sweets which are corn syrup and fructose have not yet been studied. The large consumption of milk by ADHD children is also an ongoing study (www.Factbug.co.za).

Exposure to lead in early life, pre-natal exposure to drugs, for example, the anti-convulsing medication named Phenobarbital and alcohol (NIMH, 2008), early exposure to asbestos, foam insulation, toxic waste products in water, and pollutants in the atmosphere (Ingersoll, 1998) are also environmental factors that contribute to ADHD, as well as a deficiency in essential fatty acids.

2.6 Conditions related to ADHD

Problems that learners with ADHD may experience in relation to hyperactivity include:

2.6.1 Visual problems

Eighty percent of all learning is acquired through the eye. A learner may have good eyesight, but not perfect vision. Perfect vision is related to understanding what the eye is seeing, and involves the assimilation, understanding and transference of what is seen to the brain. Vision that is impaired is not easily detected in the classroom and can manifest through the reversal of letters formation; for example, the learner will see ‘b’, but call it ‘d’. An optometrist can readily identify this specific problem in learners by testing the four visual systems, namely, The Accommodative System, to see whether the child is able to adjust his focus rapidly from near too far, and at close point; the Visual Perceptual System to examine visual memory; Binocularity Tests to test whether both eyes are integrated; and the Ocular Motor System to determine whether a child can successfully follow a line across a page (Picton, 2002, p.131).

2.6.2 Speech language and listening difficulties

Difficulties in this area impact negatively and impede on learners ability in acquiring skills that are necessary in learning to read. These skills include the ability to listen to sounds, to say or repeat sounds that are heard, and to combine sounds in order to make words. Speech difficulties such as this are common place for learners who have ADHD where 10 – 54% of these learners experience expressive language difficulties relative to 2 – 25% of the normal population (Du Paul & Stoner, 2003). Learners who have ADHD also have a higher rate of

misarticulating, reading compression, and verbal explanations than normal (Du Paul & Stoner, 2003, p. 74).

2.6.3 Emotional problems

Counseling can play a large role in treating low self-esteem and the poor social skills of the hyperactive learner. It can even assist with behaviour modification and in family counseling (Picton, 2002). Poor social skills, which include inappropriate outbursts, temper tantrums and game disruptions, often lend themselves to peer rejection and often result in a low self-esteem, aggression, or withdrawal from the group. Hyperactive behaviour causes problems between the learner, their teacher, their peers and their parents. Lack of inhibition and impulsivity are destructive as learners are unable to control their outbursts and fail to understand the consequences of their behaviour. They often react to every stimulus and are unpopular with their teachers and other learners, and are usually blamed for everything that goes wrong at school (Kruger & Nel, 2005).

2.6.4 Co-ordination difficulties

Both fine and gross motor co-ordination can be affected. Fine motor difficulties affect the ability to write, colour in, draw, tie buttons and shoe laces, and gross motor co-ordination is necessary to enjoy sports and other activities. Studies indicate that 52% of ADHD compared to 35% of non-diagnosed learners experience co-ordination difficulties (Barkley et al, 1990 as cited in Du Paul & Stoner, 2003, p. 74).

2.6.5 Inappropriate sensory modulation – these include:

- Tactile Defensiveness (the rejection or irritation a person feels when being touched)
- Auditory Defensiveness (an intolerance of loud noises unless the noises are being controlled or made by the learner)
- Gravitational Insecurity (the fear of changing positions in space). The need to have your feet firmly on the ground.
- Visual Defensiveness (an inability to cope with neon and other bright lights)
- Odour Sensitivity (a hyper sensitivity and reaction to certain smells)
- Motion Sickness / Car Sickness (Picton, 2002, pp. 128-129)
- “Low/poor muscle tone” (difficulty sitting upright at the desk and maintaining an upright posture).

2.6.6 Hypoglycemia

Hypoglycemia is a condition associated with low blood sugar levels. The intake of sugar reduces blood glucose levels as it stimulates insulin, and healthy snacks are recommended between meals to keep blood glucose levels constant.

It is believed that sugary foods influence behaviour in learners with ADHD. As to date there is no conclusive evidence that sugar exacerbates ADHD (Swanberg, Passimo & Larimore, 2003). Learners who have ADHD should eat small, protein rich and starchy snacks and avoid sugary foods to keep glucose sugar levels constant (Jones, 2000). The avoidance of sugary foods is not to influence behaviour as research indicates.

2.6.7 A learning difficulty

This is noted when there is a discrepancy between the children's tested intelligence and their academic performance. These discrepancies are commonly found in reading, spelling, writing, language and numeracy (Green & Chee, 1997, p.46). No specific study has been made to determine whether ADHD causes or leads to learning disability, or if learning disabilities lead to ADHD. What is clear, however, is that academic skill deficits do exist (Du Paul & Stoner, 2003) and need to be treated. Kruger and Nel (2005) suggest that inadequate prerequisite skills are the cause of these difficulties in learning. Learners are not taught these academic skills formally after starting grade one and these deficiencies are evident in the literary sense, when the child has difficulty with spelling, with writing, or in numeracy.

2.7 Co-existing behaviour disorders

2.7.1 Oppositional defiant disorder

This is one of the most common co-morbidities of ADHD. Studies show that 40 – 60% of North American learners with ADHD are oppositional. Children may have ODD without ADHD, but when ADHD is combined with ODD "this association of defiance and the explosive unthinking behaviour of ADHD create a volatile mixture" (Green & Chee, 1997, p. 47). ODD is treated behaviourally and there is no drug treatment available for this disorder.

2.7.2 Conduct Disorder

Studies indicate 20% of North American children have Conduct Disorder (CD) as co-morbidity with ADHD. These cases can be mild, moderate or severe. The severe CD children usually end up in "prison, become addicts, are involved in serious accidents or abuse,

die prematurely or are socially dysfunctional" (Green & Chee, 1997, p. 48). They lie, cheat, steal, are destructive, and flirt with all kinds of dangerous activities, and usually in their later years engage in illegal substance abuse, often getting into trouble with the authorities.

2.7.3 Anxiety and depression

There is evidence that stress can cause hyperactivity (Jones, 2000). Studies in Britain show that one in five school-age children are stressed. Treatment for learners with ADHD helps decrease their feelings of depression and anxiety.

2.7.4 Bipolar Disorder

Some children can have a combination of ADHD and Bipolar Disorder. Bipolar Disorder is a condition where the moods of a person fluctuate from extreme highs referred to as mania or they can drop to a depressive low.

2.7.5 Tourette's Syndrome

This is an inherited, neurological disorder that is caused by the abnormal metabolism of dopamine (a neuro-transmitter) in the brain. The symptoms of Tourette's syndrome initially resemble that of ADHD and are followed by uncontrollable tics. Concentration may sometimes assist in controlling the tics; however, short attempts of concentration and control usually end in a series of violent tics. Tourette's syndrome is more prevalent among boys than among girls. Clonidine, a drug that influences dopamine balance as well as tranquillizers can be used effectively in the treatment of Tourette's (Jones, 2000, p.18). Behaviour that is associated with Tourette's Syndrome are: nervous tics and repetitive mannerisms, such as blinking, facial twitching, grimacing, clearing the throat, snorting, sniffing or uncontrolled and inappropriate shouting out, apnoea, enuresis, substance abuse, and other disorders or illness (NIMH, 2008).

2.8 Diagnosis

By definition, ADHD is categorized as syndromes which constitute a number of symptoms, all of which constantly change from person to person. No single hypothesis is accepted as a cause for ADHD, and several have won acceptance because of convincing evidence (Kaplan & Sadock, 1995, p.2298). There are no tests available for ADHD, and accurate diagnosis is only made by a trained clinician. Psychological testing involves a number of tests, all of which need to rule out other possible causes for the manifested symptoms. The tests must rule out any co-morbid features which are as a result of other types of syndromes, such as depression, anxiety, allergies and psychosis. Included are disruptive disorders like Conduct

Disorder or Oppositional Defiant Disorder, mood disorders like Depression or Bipolar Disorder, Anxiety Disorder, Tic Disorder such as Tourette's Disorder, or learning disabilities. This is followed by a series of interviews with the child and his/her caregivers. The Connors Rating Scale, which is in the form of a checklist, is completed by the parents, the educator and any significant others. This checklist is found on the DSM-1V-TR and is used to determine which criteria are prevalent in the child. The criteria for hyperactivity must be present in more than one social setting, namely in school, at home, and in the community. The manifested behaviour must be present for a period of six months or more. It must be prevalent before the child is seven years old, must be excessive and impact the school, the home, as well as another social setting sufficiently to be regarded as problematic.

While checklists are helpful in highlighting over-activity, non-compliance and short attention span, it is evident that a comprehensive evaluation is needed to accurately diagnose the disorder (NIMH, 2008).

2.9 Procedures involved in diagnosis

1) A thorough medical examination by a neurologist or a pediatrician to identify the possible factors contributing to the display of the presented behaviour is needed (Picton, 2002). This includes an interview by the physician with the parents to discuss the child's background in order to provide a medical history and background of the child, as well as to identify the manifested behaviours of the child and their frequency. A letter is subsequently sent to the child's teacher to understand the behaviour of the child in the school setting. The educator will be asked to complete a Connors Teacher Rating Scale to highlight the child's behaviour in the classroom setting (Picton, 2002).

2) A complete psychological and/or psychiatric evaluation is needed to identify the presence of any co-morbid disorders. The psychologist will assess the intellectual ability of the child and identify any learning or behavioural difficulties that interfere with the academic progress of the child. These tests include verbal tests which aim at identifying difficulties in speech, comprehension, verbal reasoning, memory, retention and concentration difficulties. They also include non-verbal tests, and involve skills like the ability to transfer three-dimensional information onto two-dimensional areas – a vital skill which is necessary to perform optimally in a classroom situation. The assessments usually culminate with the child being referred to a speech therapist and/or an occupational therapist that will provide the necessary remedial lessons necessary to correct and remediate the areas of related difficulty (Picton, 2002).

3) The ADHD test result often leads to pharmacological intervention in the form of stimulant medication, namely Ritalin or other similar medication (Picton, 2002). The child will need to be closely monitored by the teacher as well as by the parent, with feedback on the effectiveness or ineffectiveness of the medication; therefore, the drug needs to be given and observed by both parent and teacher. The learner who is taking the prescribed drug will be observed, monitored, and the medication will need to be reviewed continually until the desired outcome and result for the learner with ADHD is achieved (Picton, 2002).

4) A parent feedback meeting with the child's class teacher which involves a discussion on the possible intervention strategies that were suggested by the psychologist is necessary and helpful for both the learner and the educator. The child may need to take a 'top up' of the prescribed medication during the school day, and this will need to be administered and monitored by the educator. The parent and pediatrician will need feedback on the learner's performance while on medication. Additional intervention may still be necessary and this will be discussed by the individuals who are involved in the teaching of the observed learner (Picton, 2002).

While an educational psychologist and numerous other physicians such as psychiatrists, clinical psychologists, clinical social workers, educational psychologists and family practitioners may all conduct the assessments of learners who have ADHD, they cannot diagnose or label the child as having ADHD (Rief, 2005). According to the National Resource Centre, practitioners must all practice only within their scope of expertise and training (NRC, 2010)

2.10 The Treatment of ADHD

ADHD can be treated with the following medical as well as non-medical interventions: Psycho – educational input, behaviour therapy, cognitive behaviour therapy, interpersonal psychotherapy, family therapy, school-based interventions, social skills training and parent management training.

Medicinal, educational and behavioural interventions are effective when used in conjunction with each other rather than using medication alone (Watchtel & Boyette, 1998). These interventions assist the parent and child in understanding and dealing with the treatment and diagnosis of ADHD, and provide the sufferer with techniques and medication that will help to manage the behaviour. Suggestions and support structures are there to assist the child within the social settings in which they find themselves, mainly the home and school environment.

This joint intervention is referred to as a "multimodal" approach and involves many stakeholders who are all necessary for the successful advancement of the child who has ADHD. A multimodal approach is by far more effective than using medication alone (Kaplan & Sadock, 1995).

2.10.1 Stimulant Medication

Stimulant medication can be taken orally in the form of a pill, a tablet, or syrup. It can also be taken in the form of a patch. The medications differ in effect, in that the same medication can have either a short, long, or extensive effect. The dosage is released immediately, gradually, or remains inside the body for an extensive period (Kaplan & Sadock, 1995).

A variety of stimulant medications are used, and while these medications may appear counter-productive, they have proven to be effective in assisting ADHD sufferers with concentration difficulties. Several million children receive medication in the form of Ritalin, Dextrosat, Adderall, Desoxyn, Gradumet and Cylert (athealth, 2010).

A new drug called Atomoxetine HCL is on the market and is used to relieve adult sufferers as well (Eliseev, 2005). All of the above assist with concentration but they do not improve academic performance. These medicines are classified as Schedule 11 under the United States Drug Enforcement Administration Schedule System, and are considered powerful stimulants for diversion and abuse; the taking of these medications is a contentious issue (Kaplan & Sadock, 1995). Research shows little evidence of future addiction or drug dependence of ADHD sufferers and medication still remains the most common method of treating ADHD (Ingersoll, 1998).

The possible side effects that may arise from taking the above-mentioned drugs include a loss of appetite, weight loss, sleep problems, restlessness, irritability, abdominal pain, diarrhea, or headache (Jones, 2000).

2.10.2 Psychotherapy

Behaviour therapy, or behavioural management, is a non-medical intervention that can be used to remedy socially unacceptable behaviours. This practice involves a system of rewarding children for their socially accepted behaviours. When a child is rewarded frequently for his good behaviour, his need to be approved of, and to please, will influence his demonstration of socially accepted behaviour (athealth, 2010). These methods show definite short-term benefits with an effect that is comparable to pharmacotherapy (Kaplan & Sadock,

1995 p.2308). Included in these behavioural interventions are: parent training, teacher consultation, school behavioural interventions, daily report cards, cognitive behavioural skills training and educational remediation (Kaplan & Sadock, 1995).

2.10.3 Diet

In 1975 an allergist Doctor Benjamin Feingold, proposed that artificial colours, flavours and preservatives increased hyperactivity in some children. Research was undertaken in New York on ADHD children and on juvenile delinquents in prison. These experiments were conducted by The Feingold Association of the United States whose investigation involved the implementation of an eating programme that was free of synthetic dye in food, medication, toothpaste or vitamins. The diet improved behaviour by 70% in learners who have ADHD and antisocial behaviour in the prison decreased by 47% (Quinn, 2012).

Studies were also made in England where learners were advised by the Hyperactive Children's Support Group to avoid eating food that contained synthetic colourants, synthetic flavourants and preservatives. Included in this list were natural salicylates (a chemical structure similar to aspirin) which is found in many fruits and vegetables. Fruit which has a high salicylate content: apples (except golden delicious), apricots, all berries, cherries, gooseberries, grapes / raisins, oranges, plums, prunes, peaches. Vegetables that have high salicylate content: chicory, cucumbers (especially their skins), red, green, yellow and black peppers, tomatoes, radishes, zucchini, chilies. Other foods include: almonds, mint and peppermint, cloves, oil of wintergreen, chili, curry, mustard or paprika powders (Picton, 2002 p. 44). Based on this and other recent studies, the American Academy of pediatrics agreed that it was reasonably optimal to eliminate preservatives and food colouring. To date researchers suggest that sugar increases hyperactivity only in some children and that caffeine reduces ADHD symptoms. While small amounts of caffeine may reduce the ADHD symptoms, there are negative side effects from the caffeine and it is not suitable for children (WebMD, 2012).

2.10.4 Homeopathy

Homeopathy is a type of medication that is based on a principle of treating 'like with like'. It is used for wellness and to treat and prevent diseases. Substances that are harmful to healthy individuals are highly diluted and shaken vigorously between each dilution, and this process is referred to as "potentization". During potentization, some form of information or energy is transmitted from the original substance to the final diluted remedy. The new non-toxic diluted

substance is used homeopathically to treat the previously harmful symptom effectively. Homeopathic medications are made from natural substances which are used to treat minor health conditions without the requirement of a prescription. Some skeptics argue that the key concepts of homeopathy are not consistent with chemistry and physics, and would like to disregard it, however, the effectiveness of this medication cannot be disregarded (NCCAM, 2011).

There are over four hundred registered homeopaths in South Africa and they provide a valuable service for the treatment of hyperactivity. They observe the child intellectually, emotionally, physically and nutritionally. They make inquiries, treat the ADHD symptoms of attention and anxiety, discuss the child's emotional stressors, observe the physical health condition of the child and recommend a suitable diet by identifying the substances in certain foods that the child must avoid (Picton, 2002, p.33).

The side effects and risks of using homeopathic medication are not well researched. No severe cases have been reported by individuals who have been supervised by a trained homeopath. Liquid homeopathic medication makes use of more alcohol than conventional drugs. No negative side effects from the alcohol have been reported. Clinical studies indicate that some patients may experience homeopathic aggression.

Types of homeopathic medicines used to treat ADHD are:

Synaptol – This is a natural remedy with homeopathic formulation and is used to address the ADD/H symptoms of hyperactivity, inattentiveness, and poor concentration.

Stramonium – is used to treat children who are fearful or who are suffering from post-traumatic stress.

Cina – is used to treat children who are physically aggressive (NCCAM, 2011).

2.11 Challenges ADHD present to education in South Africa

Prior to South Africa's democratic election in 1994, education in South Africa was differentiated and segregated according to race (black, indian, coloured and white), and was controlled by the state (Du Toit, 1996). This separate education for the various racial groups resulted in a total of nineteen different education systems, each having the same or similar expectations imposed upon them by the state, but with radically disparate funding per child. 'White' education received the most funding with significantly less funding being made

available for the other racially-based education establishments resulting in the establishment of unequal educational resources (Lomofsky & Lazarus, 2001).

These disparities evidenced themselves in the disproportionate allocation of facilities and services provided, and in the quality of teacher training where schools, colleges and universities were similarly racially segregated (Naicker, 2000). Many black teachers were unqualified, and as a result, 22% of South African black children aged 20 and over have had no formal education (Moore & Shepherd, 2007).

In the field of special education, great strides were made for white education. Their special schools were enlarged, new schools were constructed, and specialized teacher training was offered to white educators at universities and colleges. On the other hand, special education for the other population groups developed slowly, often with severe discrepancies in the quality and quantity of school provisions and resources. The deaf, hard of hearing, blind, partially sighted, epileptic, cerebral palsied, and the physically disabled all attended their own separate schools. The origin of this specifically focused process of special education began more or less with government established committees, which in 1969, sought to consider the educational needs of children who evidenced minimal brain dysfunction. This was followed in 1971 by similar investigations into the needs of autistic children, and in 1974, severely handicapped children's education was considered. The establishment of the actual schools and support infrastructures for children with these specific educational needs followed the institutional discriminatory process, again advancing the privileges of a minority of South Africans (Du Toit, 1996).

The years of this unequal funding and the perpetuation of a discriminatory system of education resulted in a legacy of white schools, on the one hand, being fully provisioned with adequate facilities and professionals. African children, in comparison to 1987, although demographically constituting the largest single racial grouping in the country, only received 12% of the national education budgetary allocation for special school expenditure (Du Toit, 1996), which affected both mainstream and specialized facilities for blacks (Donald *et al*, 2002).

The abolition of apartheid brought with it much optimism and the promise, finally, of a unified national education department that would ensure the equitable distribution of government educational spending. Unfortunately, the years of perpetuated under-spending on black, coloured and Indian educational needs had ensured that most of their facilities were in radical need of upgrading and urgent resourcing, in respect of not only teaching aids, but also sufficient numbers of appropriately trained educators and professionals to cope with the dire

needs of these establishments (Naicker, 2000). In an attempt to address this legacy of segregated education, the first Minister of Education, in the new democratic South African Government, Professor Bhengu, sought to promote an institutional approach that was inclusive, non-discriminatory and focused on providing accessible education beneficial to all its stakeholders. This policy was presented in a unified Education Policy Document, namely, The White Paper on Education and Training in a Democratic South Africa in February 1995.

A key challenge for this unified education system was the unravelling of the entrenched dual system of education, which comprised separately operated special school systems on the one part, and mainstream schooling on the other part. The new "Policy of Inclusion" was introduced, and had – as one of its key long term objectives – the ultimate integration of children, and with the hope that the full participation of all learners in the school curriculum could be with special needs into a mainstream educational environment (Frederickson & Cline, 2002, p. 66).

The Education White Paper 6 (2001), which sets out these policy objectives, states that all children have a right to be educated and accommodated in schools, and stipulates that learning barriers need to be identified, and teaching methods must be modified in order to accommodate the differing needs of all learners. These barriers could be permanent, recently acquired, fluctuating or circumstantial (WCEB, 2011) and they include the following:

- Physical, mental, sensory, neurological and developmental impairments
- Psycho-social disturbances
- Differences in intellectual ability
- Particular life experiences
- Socio-economic deprivation
- Negative attitudes to and stereotyping of differences
- An inflexible curriculum
- Inappropriate language/s and teaching
- Inappropriate communication
- Inaccessible and unsafe built environments
- Inappropriate and inadequate support services
- Inadequate policies and legislation
- The non-recognition and non-involvement of parents

- Inadequately and inappropriately trained education managers and educators (EWP6, 2001).

Allied to this is the express declaration that education is to be viewed as a continual process, and that all schools need to diligently explore their own methods of promoting a full component of learner participation, and discovering where the diverse needs of all learners are to be met (Booth & Barton, 2000). The needs of the learner with ADHD encompass at least three of the above mentioned barriers.

While education has been unified since 1994, the years of an institutionalized system of apartheid has marginalized and separated the different education departments and facilities in location and distance, making the accessibility and availability of resources difficult for a number of schools. To remedy this situation, or to create an enabling framework within which the imperatives of this policy objective can be achieved, will require a considerable amount of time, logistical support and patience from all stakeholders involved. Support from within the school, from the community, and from networking with other special schools and universities are essential in sustaining inclusive education (Kruger & Nel, 2005, p. 20).

To date, educators are constantly confronted with ever-changing teaching methods and approaches which militate against the evolution of a stable teaching environment. Teachers were previously trained to teach from a curriculum and, according to the newly imposed curriculum 2005, were now expected to create their own curriculum (Moore & Shepherd, 2007).

The failure to settle on a standard long-term approach to teaching and assessing learners served only to confound the process of continuous measurable assessment of learner progress over periods of time. While the introduction of new education policies may have had a positive influence on South African education, the transformation in education has not yet been realized, as educators often have to abandon methods before they have had sufficient opportunity to grasp new methods before even newer methods are put in place (Moore & Shepherd, 2007). Educators who are unqualified have to catch up with this by studying part time; they have to adjust and plan lessons according to the newly prescribed curriculum methods, as well as cope with the special needs of all their learners. The special needs of learners may be varied and intensive, and the special needs of learners with ADHD is challenging in that it often requires immediate intervention, and if poorly managed, can be very disruptive for other learners who have concentration, hearing or emotional difficulties, and this can undermine learning for all those concerned. Support is, therefore, essential to successful inclusive education, and schools should foster supportive and caring communities in which everyone feels they belong (Kruger & Nel, 2005, p. 19).

2.12 Education of learners with ADHD

According to the South African Constitution Act 108 of 1996, Section 29 (1) all learners have a basic right to education. Learners with or without disabilities must be able to pursue their potential to the fullest. The South African Education Policy in a document Education White Paper 6 recognizes the class teacher as the primary source for meeting the diverse learning needs of all learners; this includes learners who have ADHD (Donald, Lazarus & Lolwana, 1997). The minister of education outlines how education has to transform in order to meet the full range of learning needs in schools and the mechanisms that need to be put into place.

Where previously learners were separated according to race and disability, the focus now would be on the intensity of support that learners required. Learners who needed high intensity support would attend special schools. Special schools would at times accommodate learners who required less support and who should be mainstreamed. This means that the majority of learners including those learners who have ADHD would be placed into mainstream schools where the class teacher would be responsible for meeting the diverse needs of all learners. Educators would be taught how to implement strategies and interventions that would ameliorate learning difficulties. Specialist educators would not be based at school but at the district to be drawn upon by each school as they required (EWP6, 2001). Learners who have ADHD have symptoms that vary in degrees of severity. They can be mild, moderate or severe and difficulties in handling in class can depend on this (Lopes, 2008).

2.12.1 Support Structures for Learners with ADHD

The educational support proposed by the Ministry of education is that learners with barriers would be identified early and that provision made for their appropriate support. District support teams were established whereby educators could access appropriate pre-service and in-service education and training as well as seek professional support services. The Ministry would also ensure that educators were trained and competent in addressing the needs of learners with barriers and ensure that educators developed specialized competencies in life skills, counselling and learning support (EWP6, 2001).

Swanberg *et al* (2003), suggest that parent- teacher teams are an excellent support structure for learners with ADHD. A school-based support team with colleague support is also a vital support structure to teachers. All teachers, at some point in their teaching career, will be confronted with difficult or challenging learners in their class. Many educators would benefit

from the support of their colleagues during these moments, but are often afraid to admit their need as they fear that they would be perceived as incompetent. Studies show that schools that have good support structures have less stressed educators. Research on job-related stress concluded that colleague support affected the stress levels and coping resources of individuals positively (Rogers, 2002). Teachers indicated that "when others (particularly senior staff) in their school acknowledged and affirmed their skills and abilities, there is a great sense of personal and team accomplishment, and their feelings of depersonalization were lessened" (Rogers, 2001; as cited in Rogers, 2002, p.141).

Educators may need time-out, especially during moments of class chaos. Support teachers or senior teachers can intervene by relieving them of their challenging learners in a non-threatening manner. These support teachers could, for instance, enter the stressed educators' class and request the use of two or more learners to run an errand. In this way, the class teacher can choose which learners she would need to exit her class and hopefully restore the class to order without the learners being aware of the intended intervention. This type of intervention would also not be embarrassing or undermining for the concerned educator. District-based support teams need to be accessible to all schools, and schools need to liaise with other special needs schools in the surrounding areas (Rogers, 2002).

Numerous support structures can be found on the internet and are helpful to parents, teachers and ADHD sufferers themselves. Some examples of support services in South Africa are: ADHASA, ADDERS, ADHD-Moms Matter (support group), Ufosa Foundation, Ananzi Directory, St. Aiden's Home School – How to help your child cope with ADHD. Courses and seminars are held annually in Gauteng where they discuss the various aspects of ADD and hyperactivity. A quarterly newsletter is disseminated and this is helpful in understanding the disorder that affects individuals worldwide. It also includes a summer camp for the children (ADHDsupport.org).

2.13 Management of ADHD in the classroom

2.13.1 The educator

The educator needs to be calm, consistent, supportive, firm and in charge (Swanberg, Passno & Larimore, 2003, p. 70). The ideal teacher is "firm, flexible and knows when to back off" (Green & Chee, 1997, p. 103). Secret codes should exist between the learner who has ADHD and their teacher, for example, a gentle hand placed on the learner's shoulder could redirect

him to the task at hand (Picton, 2002). For effective classroom management, it is important that educators have a good understanding of ADHD. According to Swanberg, Passino and Larimore (2003), teaching learners with ADHD does not have to be threatening or frustrating to educators, however, they need to know that this disorder is developmental and appears with a variety of symptoms. It is not a reflection of poor parenting and can most often be managed in the classroom. Teachers need to learn practical techniques that promote the self-confidence and encouragement of these learners. Teachers who are patient and who understand the unique learning styles of learners with ADHD make a considerable difference in their development and self-image.

Research indicates that most educators do not know how to teach learners who have ADHD and lack a basic understanding of the nature of the disorder as well as the necessary skills in classroom management (Greene & Chee, 1997). A majority of educators manage the behaviour of ADHD learners rather than modify their tasks and manipulate their physical environment (Abramowitz, Am & O Leary, 2009). Educators need to be familiar with treatment options, behaviour interventions and classroom modification techniques that are effective in treating ADHD learners.

2.13.2 The classroom

The learner with ADHD needs to be seated in the front of the class facing the teacher at all times. They should be seated between two peaceful classmates, and if possible, a U-shaped seating plan is reported to yield good results. Learners should be seated away from noisy areas such as busy traffic and doorways (Ingersoll, 1998). The ideal learning environment would be a full-time tutor and classrooms with the least amount of distractions; however, this is an unrealistic possibility for most learners as private tuition is expensive (Green & Chee, 1997).

2.13.3 The learner

Learners who have been diagnosed with ADHD thrive in organized, structured environments where the teacher's expectations and rules are clear and there is consistency with regards to rewards and consequences (Swanberg *et al*, 2003). The learner who has ADHD needs to feel accepted and appreciated by a firm teacher. These learners are very vulnerable, and educators need to be sensitive and understanding of their specific behaviour traits, namely, those associated with inattention, hyperactivity and impulsivity.

2.13.4 The lesson

Lessons must be exciting, varied and simple, and provide lots of learner feedback. Learners who have been diagnosed with ADHD are disorganized and it is vital to teach them organizational skills. Rules, routines, lists and structure must be rehearsed, reinforced and remembered in order for the learner to be successful at school. The skill of breaking big projects into smaller workable chunks is necessary. Time management is also important, and parents, as well as the educator, can play a large role in assisting the learner with the above (Green & Chee, 1997).

In order to maintain concentration, educators can make use of various techniques, such as varying their tone of voice, making use of cues, keeping lessons and instructions simple, and asking learners questions in order to validate that the learners have, in fact, understood the lesson. To improve the memory of the learner, educators can make use of pictures or visual aids, make use of visual cues to jog memory, and ensure that all new work that is taught is linked with work that the learner already knows (Green & Chee, 1997).

2.13.5 Psychological Interventions

Educators can make use of various techniques to modify the behaviour of learners and control the success of their classrooms. The first technique suggested by Rinne (1984) is comprised of six elements that educators can use to keep learners interested and attentive during class lessons. These are: the element of surprise, novelty, motivation, suspense, competition, and relativity (Rinne, 1984). If learning material is interesting, teachers seldom have to make use of external rewards for performing certain tasks.

A second intervention would involve the use of contingent reinforcement to modify learner behaviour; for example, an educator would praise and give attention to desirable learner behaviour and ignore undesirable behaviour. The success of this method is demonstrated when learners perform the desired expectation in a reasonable time limit. If the learner does not modify their behaviour, the educator would need to "shape" the learner. This process of "shaping" involves a focus on not only rewarding the learner for content, but by praising the learner on the areas or procedures that they have managed successfully (Jones, 2000).

Another intervention would be rewarding learners with a token. This technique is controversial and is criticized for fostering materialism, as it encourages a dependence on immediate external rewards as a method of conforming behaviour (Rinne, 1984).

A fourth method would be for educators to target certain students and reward their behaviour which would be based on non-content behaviour. This method is commonly used in the lower

grades where an educator, for example, would not comment on a learner who is not paying attention, but rather makes a comment like "you are all so attentive" or he/she could call out the names of a few learners and praise them for being so attentive (Rinne, 1984, p.285).

A fifth method involves the educator isolating targeted learners. Learners can be isolated from a group in the class or removed from the room. Time-out for the learner can be effective if they understand why they are being given "time-out' and is helpful in resolving emotional outbursts. Removal from the classroom should be a last resort as learners will lose out on important information by not being present during instruction time in the classroom (Rinne, 1984).

2.14 Theoretical framework

Theories are "an intellectual framework that organize a vast amount of knowledge about phenomena and assist in understanding and explaining better the nature of the phenomenon" (O'Donnell *et al*, 2009, p. 20). They are "a set of statements that summarize and explain research findings and from which research hypothesis may be derived" (Sdorow, 1990, p.38). They are "a set of ideas, assumptions and concepts that explain the world, ourselves, or an aspect of reality" (Kruger & Nel, 2005, p.9). They assist educators daily by highlighting the types of learning environments and indicate the tasks necessary for them to accomplish their goals. They "assist psychologists with the predictions they make in their hypothesis" (Sdorow, 1990, p.38). They are "descriptive and provide abstract, logical, coherent explanations and reasons" (Norman *et al*, 1994:4). Theories are "factual, yet simple enough for people to use to make sense of their world" (Tuckman, 1972, p. 8).

According to Tuckman (1972), the purpose of theories is threefold:

- They explain the why of something.
- They have a broad base, therefore, only a few theories need to be learned.
- They are speculative and explanatory, and can explain how to deal with situations.

The learner who is diagnosed with ADHD is more specifically influenced by the dynamics from the behavioural perspective; therefore, this study will be viewed chiefly from the ecological systems theory. It will include elements from the social learning theory, and explain the environments the child finds themselves in (Kruger & Nel, 2005).

2.14.1 The social learning theory

This theory is considered a neo-behavioural theory, as it initially included the concepts of reinforcement and punishment. Albert Bandura further developed this theory by adding to it the cognitive elements of attention, encoding and retrieval (O'Donnell, Reeve & Smith, 2009). It serves as a bridge between the behaviourist and cognitive theory, because it encompasses attention, memory and motivation.

The theory assumes that social behaviour is learned mainly through observation and by mentally processing the observed behaviour (Sdorow, 1990). It posits that learning takes place through observation, imitation, and from modelling behaviour. It is related to Vyotsky's Social Development Theory and Lave's Situated Learning (www.learning-theories, 22th January, 2000).

According to Bandura (1977) the environment is a key factor in shaping behaviour. Social learning takes place daily through the observations of people. Behaviour is observed and then modelled (Bandura, 1977). The process of gender-role behaviour, for example, begins from birth. Children observe gender behaviour and are rewarded for imitating the appropriate gender-role behaviour (Sdorow, 1990). Bandura (1977) believes that while the environment shapes and influences behaviour, the behaviour causes environment as well. This process is referred to as "reciprocal determinism" (Bandura, 1977). Both the educator and the learner have a role to play in the learning environment. While the educator may regulate the behaviours of his/her learners, the learner can choose to co-operate or not. The learner's specific choice of behaviour impacts the learning environment, which has the potential to create either a pleasant or unpleasant, learning environment.

Learning is achieved when there is a permanent change in behaviour that has resulted from the continuous interaction of an individual with their environment. According to the social learning theory, learners can learn from their own experiences or from the observation of others. This is referred to as vicarious experience. Vicarious experiences are modelled by observing others behaviour (Bandura, 1977). When the observer perceives the enacted behaviour to be beneficial and rewarding, they model or imitate it, and if the behaviour is viewed as punishable, it is often discouraged (Mwamwenda, 2004). According to O'Donnell *et al* (2009), learners learn four things through vicarious experience. These are: new behaviours, new consequences, performance expectations and self-talk.

Du Paul and Stoner (1994) suggest cognitive apprenticeship as another instructional method that educators make use of. This is when the educator coaches and the learner acquire

knowledge. The learner needs to pay attention and be able to retain information if he/she is expected to model behaviour. If behaviour is negative, it interferes with successful classroom learning and interferes with the conforming of socially accepted behaviour. When educators are able to coach attentive learners cognitively, positive behaviour can be modeled and retained (Du Paul & Stoner, 1994).

The concept of reciprocal determinism will inform this study by observing the issues and challenges that mainstream educators experience when teaching learners with ADHD and the effects of these interactions on the educator, the learner and their peers (Bandura, 1977).

Cognitive apprentice ship as an instructional method will be of assistance to those learners who have ADHD and who are taking medication to address their underlying difficulties of poor concentration. These learners will be able to concentrate, retain information and emulate positive behaviour. If their behaviour is negative, and they do not conform socially, they will be rejected. The educator therefore needs to make provision for short attention span as a deterrent in her learners by constantly reinforcing what is the expected behaviour and in this way avoid the exclusion of any learners which could lead to them feeling rejected. The social theory looks at the child socially and shows that conformity reaps favourable results while non-conformity leads to rejection.

2.14.2 The ecological systems theory

This theory originated from Urie Broffenbrenner and has its origins in the ecological and systems theory. It focuses on the individual, as well as group relationships (Donald, Lazarus & Lolwana, 2002). It posits the complex structures of the environment and the effects that these structures have on the development of the child. This theory has been renamed "bio-ecological systems theory", and indicates that the child's own biology is a primary structure that is involved in shaping their development (Bronfenbrenner, 1979).

In order to study the learner, one has to look at the child, his immediate environment, and his /her interactions, the effects of these interactions and how he perceives him/herself. These four dimensions form the basis of Brofenbrenner's ecological model. It is the place where the child, parent, family relationships, social contexts and the passing of time form the key elements in understanding how children develop (Donald *et al,* 2002).

Child development takes place in four systems, namely, the microsystem (child); the mesosystem (school, religion, family); the exo-system (community, society, culture); and the macrosystem (global society); all of which either help or hinder their development (Bronfenbrenner, 1990).

This theory sees the inter-relatedness of an individual's psychological development in a social context amidst the various systems in which they are placed. It also provides insight and understanding into the fact that child development can impede on social development as well as create barriers to learning (Donald *et al*, 1997). The ecological approach identifies the importance of understanding individual child development and their specific needs in ensuring a healthy and supportive social environment, and the reality that intervention strategies can impact either negatively or favourably in establishing a competent and accepted individual. It sees the classroom as its own system, placed in other larger systems and how they all relate and connect with each other. It notes how problems encountered in the class affect the child in the other systems. It suggests that consistency in expected behaviour at home, in class, in school and in the community assist in establishing a supportive ecological system, and will result in optimal development in the child. It indicates that the child's biological and psychological composition are continuously affected and modified by the physical and social environment (Bukatko & Daehler, 2001).

The ecological systems theory will inform this study by providing a framework of the complex structures of the environment and the effects these structures have on the development of the child. It identifies the biology of a child as the primary structure that is involved in shaping their development (Bronfenbrenner, 1979).

2.15 Summary

This chapter reviews the literature on ADHD: its prevalence, diagnosis, causes, and treatments. It highlights the challenges that learners who have ADHD present in education. It also notes the available, or lack of available, support facilities for these learners, and proposes that the previous disparities in South African education still affect education today. It concluded that, while every effort may be made by the educator to make the learning environment inclusive, the process is largely reliant on the shared efforts from parents, learners, teachers, medical practitioner/s and significant others. It noted that the learners with ADHD needed to be included and involved in the learning environment in order to truly benefit from an inclusive mainstream education environment.

While two theoretical frameworks frame this study, the ecological systems theory is the most relevant. It looks at the child, the environments in which the child finds himself, how these environments affect him and how he can affect the environments in which he finds himself in. It recognizes that there is a difference in the biological make up of children and this shapes who they are. It encourages educators to accommodate individuality and be inclusive of all learners, including those who have ADHD.

Learners who have ADHD experience major adjustments to school expectations and demands. The teacher's role is, therefore, pivotal, if successful learning at school is to take place (Barkley, 1994). She will need to manipulate and influence the classroom environment by regulating the behaviour of the learners, as this impedes and impacts the learning environment by the process of "reciprocal determinism" (Bandura, 1977, p.195).

The next chapter, Chapter 3, will look at the type of research methodology used, the sampling, the respondents, the instruments used, the validity and reliability as well as the ethical consideration.

CHAPTER THREE

METHODOLOGY

> *"I keep six honest serving men, they taught me all I knew, their names are What and Why and When, and How and Where and Who."* – [Rudyard Kipling, cited in Picton, 2002, p.25]

3. Introduction

The purpose of the study was to investigate the experiences of foundation phase educators in mainstream schools who teach learners with Attention Deficit Hyperactivity Disorder (ADHD), to understand the intervention strategies that these educators use when dealing with their learners and the support structures that educators rely on when dealing with learners who are diagnosed with ADHD.

3.1 Research design and methodology

A qualitative case study was used to capture the real life experiences of seven South African mainstream educators, and explore and interpret the context of their situation (Cohen & Manion, 2007). This case study was viewed from an interpretive perspective and strove towards understanding the subjective experiences of educators, thereby giving voice and the perspectives of the seven mainstream educators, who would otherwise be powerless in that their opinions and experiences would never be known (Maree, 2007). Case studies belong to the area of qualitative research and aim to understand social situations through thick, rich data (Patton, 2002). The case study method was chosen as it would assist in understanding the experiences of seven South African educators, and explore and interpret the interventions that these educators use in their over-crowded mainstream classrooms to deal with learners who have been diagnosed with ADHD.

3.1.1 The case study

A case study is more than the narration of an event or a story; it is a systemic collection of evidence for a study that has been planned; it is a deep and intense study of various phenomena that formulates generalizations about the wider population based on the study of the unit to which the subject belongs (Cohen & Manion, 2007). Case studies are systematic,

critical, related, and valid and improve education and they are the only method of research that provides deep insight into the behaviour of children (Bassey, 1999). It is for these reasons the researcher has chosen this method as it is well-suited and relevant.

A limitation of the case study, according to most critics, is that it lacks reliability (Anderson, 1990), their results are generalisable, they lack value and they have difficulty in formulating comparisons. Bassey (1999) contradicts this view, stating that relatedness is more important than generalization. This view is supported by Anderson (1990), who believes that case study research is largely data-based and it strives for the same degree of reliability and validity as any good research.

3.2 Research setting

The study is located in KwaZulu-Natal in the North Durban region. The participants came from three schools that were previously classified as Coloured Government Schools, but have recently become racially integrated to some extent where the demographic profile of the learner population remains predominantly black in two schools, and predominantly coloured in the third school. The majority of learners come from disadvantaged backgrounds. This setting was identified and selected on the basis of the researcher's accessibility, time constraints, and an interest in ADHD learners in a mainstream environment. The sampled schools are currently referred to as public schools.

3.3 Description of sample schools?

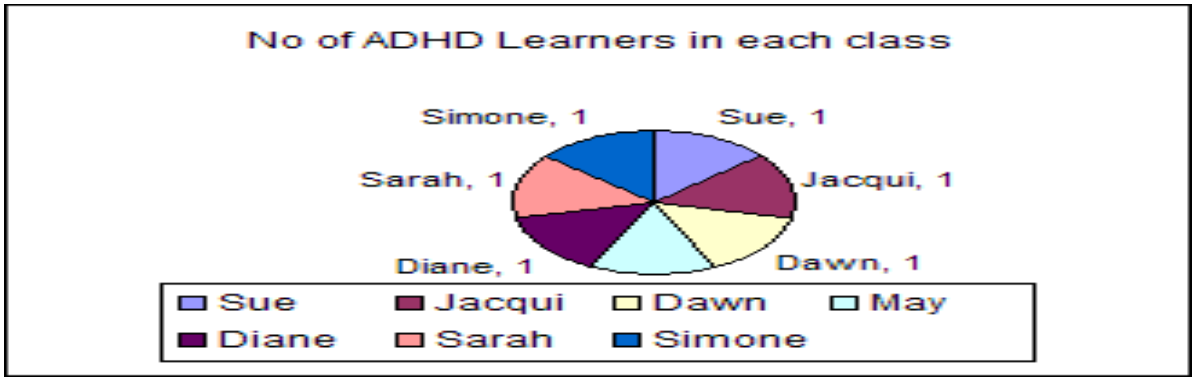
The sample consisted of seven foundation phase educators who were, at the time, teaching a learner 'diagnosed' with ADHD. Purposive sampling technique was used in that the educators were selected based on a specific feature that the researcher was interested in (Silverman, 2000). The 7 educators were all teaching a learner who was diagnosed with ADHD and they were all teaching in the Foundation Phase of 3 schools. All the educators in the study were female – that was not by choice as the educators in the Foundation Phase of the 3 schools are all female. This could be one of the limitations as there is no male perspective and ADHD is predominantly a male disorder and three times more common in boys than in girls (Swanberg *et al*, 2003).

The 7 participants were required to fill in a biographical questionnaire which requested their names, qualifications, race, teaching experience in years, educators experience in teaching learners with ADHD, the number of learners in their class and their sex. The questionnaire was analyzed descriptively and frequencies and percentages were calculated for all the questions in the biographical questionnaire. The following tables and graphs were computed from data (Appendices 1-5).

Figure 3.1: Biographical details of participants

Name	Grade	Race	Academic Qualifications	Teaching Experience	Experience withADHD	Class Size	Sex
1. Sue	2	Coloured	M+3	10 years	8 years	44	F
2. Jacky	3	Indian	M+3	30 years	20 years	43	F
3. Dawn	3	Coloured	Bed Hons.	23 years	2 years	48	F
4. May	2	Coloured	Bed Hons.	21 years	2 years	45	F
5. Diane	1	Black	M+3	14 years	1 year	41	F
6.Sammy	3	Black	M+3	5 years	3 years	43	F
7. Simone	3	Coloured	Bed Hons.	3 years	3 years	48	F

Figure 3.2 Number of ADHD learners in each class



The participants for this study each have a learner who is diagnosed with ADHD in their class. The table indicates a 100% of the educators are teaching a learner diagnosed with ADHD.

Table 3. 1 Profile of educators according to grade

Grade	Number of Educators	Percent
Grade 1	1	14.3
Grade 2	2	28.6
Grade 3	4	57.1
Total	7	100

Table 3.1 indicates that 14.3% of the educators taught in grade one; 28.6% of the educators taught grade two; and 57.1% of the educators taught grade three. The grade was mentioned as the study involved only foundation phase educators. This meant that the participants needed to be teaching in grades R, one, two or three. No feedback was generated from Grade R in any of the schools, so it was excluded.

Table 3.2 Profile of educators according to race

Race	Frequency	Percent
Black	2	28.6
Indian	1	14.3
Coloured	4	57.1
Total	7	100

Table 3.2 indicates that the majority of educators are coloured and they average 57.1%, followed by black educators which average 28.6 %, and then indian educators who average 14.3%. There were no white educators who were currently teaching in the foundation phase of either of these schools, therefore, none were involved in this study.

Table 3.3 Profile of educators according to academic qualification

Qualifications	Frequency	Percent
Diploma	4	57.1
Degree	1	14.3
Honours	2	28.6
Total	7	100

Table 3.3 indicates that the majority of educators, 57.1 %, have a diploma in education. 14.3% have a degree and 28.6 % have an honours degree. This could indicate that those educators who advanced their studies realized the importance of staying abreast with the latest developments in education (Griessel, Louw & Swart, 1995).

Table 3. 4 Profile of educators teaching experience

Years of teaching	Frequency	Percent
1 – 9	3	42.9
10 – 19	1	14.3
20 – 29	2	28.6
30 – 39	1	14.3
Total	7	100

Table 3.4 indicates the educator's years of teaching experience which ranged from 1 – 30 years. The largest group of educators had between 1 – 9 years of teaching experience and they averaged 42.9 %. The second largest group was in the 20 – 29%, and both the 10 – 19 and 30 – 39 averaged with 14.3 % respectively. It is assumed that the educators who had been teaching for 30-39 years would have more teaching experience, skill and knowledge in dealing with learning disorders such as ADHD.

Table 3. 5 Experience in teaching learners with ADHD

Experience in years	Frequency	Percent
1 – 5	5	71.3
6 – 10	1	14.3
11 – 15	0	0
16 – 20	1	14.3
Total	7	100

Table 3.5 indicates the educator's years of teaching experience with learners diagnosed with ADHD. The largest group ranges between 1 – 5 years of teaching experience, which averaged 71.28 %. Both the 5 – 10 years and the 15 – 20 years averaged 14.28% each, and none of the educators fell in the 11 – 15 year range in experience in teaching learners who have ADHD.

Table 3. 6 Number of learners per class

Educator	Number of Learners in class
1. Sue	44
2.Jacky	43
3. Dawn	48
4. May	45
5. Diane	41
6. Sammy	43
7. Simone	48
Average	44.57

Table 3.6 reflects the class sizes which ranged from 41- 48 learners. The reference to the amount of learners in each class would indicate the enormity of the teaching workload and the limited availability of teaching time, as well as the difficulty in providing the learners who have ADHD with the much needed attention that they require.

3.4 Data Collection

3.4.1 The questionnaire

The researcher met with the three principals and requested permission to do research in their schools. All three principals agreed and informed their staff of the researchers intended study. The principals indicated the educators in the foundation phase who were teaching learners diagnosed with ADHD. Two educators were chosen from each of the two schools and three educators came from the third school. Seven educators were interested in taking part in the research and were handed a questionnaire to complete.

The questionnaire (Appendix E) included both open-ended and close-ended questions, and it was handed out and read through by the researcher and the educator to ensure a complete understanding of the contents by the participants. The participating educators were encouraged to relate their own experiences with their learners who have ADHD, and were again reassured of the researcher's confidentiality. They were encouraged to contact the researcher by telephone or email should they encounter any difficulties with the questionnaire. They were also given adequate time to complete the questionnaire. The questionnaires were collected and the data analyzed according to themes (Anderson, 1990).

3.5 Credibility and trustworthiness

According to Guba (1981) as cited in Krefting (1991), the four criteria for assessing trustworthiness in qualitative research are: truth value, applicability, consistency and neutrality.

Truth value questions the confidence of the researcher to deal with the real/true findings of the research, and tests internal validity as well as the validity of the instrument (Krefting, 1991).

Applicability refers to the researcher's ability to apply his findings in various settings and context, as well as the ability to generalize the findings in larger populations and manage any threats to external validity (Sandelowski, 1986 as cited in Krefting, 1991).

Consistency refers to the consistency in data upon retesting (and the consistency of its findings, and is based on a single reality that acts as a fixed benchmark, (Sandelowski, 1986; Lincoln & Guba as cited in Krefting, 1991).

This scientific approach to research makes it more objective, thereby eliminating bias in the study. Lincoln (1985) suggests that shifting the focus of the informant towards the data, serves as an indicator of neutrality (Krefting, 1991).

Strategies like triangulation and reflexivity increase the trustworthiness of qualitative research. Reflexivity refers to the experiences that shape and influence the researcher's perceptions and interest in the research. Reflexivity influences the planning, method and interpretations of the study, and provides the platform for the various roles the researcher engages himself in (Agar, 1986). Triangulation refers to the cross-checking of data to ensure a credible interpretation (Krefting, 1991), or the use of two or more methods of data collection in the study of some aspect of human behaviour (Cohen & Manion, 2007, p. 208). This is effective in that it minimizes distortion from single data sources and bias from researchers (Krafti & Bretmayer 1989, as cited in Krefting, 1991).

Triangulation is used extensively in quantitative research to generalize and confirm findings, and if any exceptions are encountered, the theory is rejected. Unlike quantitative research, qualitative research does not define concepts in context or in paradigm; instead they modify any exceptions that are found in theories and bear in mind the various perspectives, realities and individualities of participants. Richardson (2000) proposes the concept of crystallization as opposed to triangulation which is rigid, inflexible and two-dimensional (Maree, 2007, p.81).

To ensure credibility and trustworthiness, the researcher conducted a pilot study with 2 educators, one from grade 1 and one from grade 3. She had already checked with the office in the school if there were any learners who were diagnosed with ADHD in the foundation phase. There were no learners at the time in her school that had been assessed although many educators continually complained of disruptive and hyperactive behaviour in their classrooms. The researcher presented a Vignette on "Recognizing Hyperactivity" in the pilot study in case the educators were unsure of what ADHD was and they would then be able to recognize the disorder from the particular antics of Betty as described in the Vignette. The 2 educators were then handed a Connors Teacher rating Scale on which they had to tick off behaviour that best described their own hyperactive leaners and were also asked to complete a questionnaire. A letter was sent home to the parents of these 2 learners and was accompanied by a letter from the principal informing them of the researchers intended study. It took a year before one of the learners were properly assessed and diagnosed by a pediatrician as having ADHD, there was no follow up done by the parents of the second leaner. This lengthy process was necessary as the researcher needed to know that the learners had been correctly diagnosed and

were not "self-diagnosed or labeled as having ADHD based on their teacher's experiences and their identification of hyperactive behaviour in learners. While the research involved educators experience and one would tend to preclude the learners, the credibility of the research was reliant on the fact that these learners were in fact diagnosed with ADHD. It was based on this knowledge of the learners ADHD status that educators were identified and then approached to take part in the research.

The pilot study was very useful in that it revealed to the researcher that while the participants for the study were educators, she needed to be sure that the learners were properly assessed and diagnosed as having ADHD and there needed to be some evidence that these learners had been diagnosed by a physician. Educators are often the first to identify the symptoms of ADHD from their learner's behaviour in school; however an accurate diagnosis can only be made by a physician. The pilot study also highlighted that 2 questions from the questionnaire were leading and therefore needed to be changed. The educators also needed more time to complete the questionnaire as it appeared short but was in fact time consuming to complete. The researcher had to allocate more time to the educators in order to complete the questionnaire.

3.6 Ethical Issues

Ethics are a cause for concern in case studies as the subjects or institutions that are being researched could possibly be recognized. The purpose of educational case study is to improve education, and, invariably, this would create some exposure to the participants. The researcher, therefore, needs to be very mindful of the ethics involved during educational case studies (Keeves, 1988), and the researcher is also, therefore, obligated to protect the participants and the profession when conducting research (Aryl, 1985).

The following ethical issues were considered:

- An ethical clearance certificate was issued by the University's Ethics Committee (appendix H).
- Access to the three schools was granted by the Department of Education, and consent was given by the principals, the educators and the parents of the learners who have ADHD. (appendix A1, A2, B, C, D).

- Informed consent was obtained from the principals of the three schools and the seven educators who were participants in the study. Informed consent was also requested from the parents of the learners who were being observed. This was necessary as it would validate that the learners were diagnosed with ADHD.

- Access was granted to the researcher to view the learners' psychological reports which confirmed that they were all assessed and diagnosed as having ADHD by a pediatrician/psychologist or clinician.

- Confidentiality was assured, and the names of the participants and schools were substituted with pseudonyms (Maree, 2007). The educators were referred to as educator 1, 2, 3, 4, 5, 6, and educator 7 and the names of the 3 schools are not mentioned. The data was kept locked up in a filing cabinet and would be destroyed as soon as the research was over. The researcher, therefore, acknowledged the participants' right to privacy, and assured them that they were not obligated to participate in the research, and were free to withdraw from the research at any time.

- The researcher was honest, debriefed the participants, respected the respondents' time, accommodated differences in culture by writing letters in both English and Zulu, and extended the time for data collection at the request of the participant (Anderson, 1990).

- Voluntary consent and withdrawal was permitted to all the participants. Data was made available to the educators to validate. Parents were involved to inform them of the study and as a means of gaining psychological reports that would be proof that their child had ADHD. Not all the diagnosed learners had left their psychological reports with the principal.

3.7 Data Analyses

To understand the experiences of mainstream educators who teach learners with ADHD, the data for this study was analysed using 3 research questions as frames. These were:

- What are the experiences of mainstream educators who teach learners who have ADHD?

- What intervention strategies do mainstream educators employ when teaching learners who have ADHD?

- What support structures do educators rely on to support them with their learners who have ADHD?

3.8 Summary

This chapter outlined the research setting, the sampling, the methodology and the instruments used to discuss the reliability, validity and ethics for this study.

Chapter Four will focus on the presentation and analyses of the data.

CHAPTER FOUR

PRESENTATION AND ANALYSES OF DATA

> *"Children with Attention Deficit Hyperactivity Disorder are like diamonds in the rough. It takes special care and time for them to dazzle"* – [Stordy and Nicholl, 2002, p. 21].

4. Introduction

This chapter presents the findings of the above data and their analysis by using the critical questions in this study, which are:

- What are the experiences of mainstream educators who teach learners who have ADHD?
- What intervention strategies do mainstream educators employ when teaching learners who have ADHD?
- What support structures do educators rely on to support them with their learners who have ADHD?

4.1 Analyses of data

The data for this study was organized and categorized into 3 major themes in order to understand the experiences, challenges, interventions and support available for these seven mainstream educators who teach learners who have ADHD. These themes provide deep insight into the experiences of these seven educators whose opinions and experiences on the effects of learners with ADHD in mainstream classrooms would, under normal circumstances, have made no impact (Bell, 1987); but given the nature of the case study, their experiences are valuable in providing insight into their live experiences at their three mainstream schools.

4.2 Theme 1 - Mainstream educators' experiences of teaching learners with ADHD?

The following questions guide the theme:

4.2.1 What challenges do learners with ADHD present in class?

4.2.2 How are these challenges experienced by the participant educators?

4.2.3 Are the needs of learners who have ADHD met in mainstream classrooms?

4.2.1 Challenges these learners present in class

My learner with ADHD constantly distracts his peers. He is often very disrespectful and rude to me. He has difficulty expressing himself and feels frustrated as he is often not understood. (Participant 1)

During lessons my learner needs a lot of my focused time and attention. He has difficulty grasping new concepts as well as concentration and attention difficulties. He disturbs the class lessons and the learners. (*Participant* 2)

My learner who has ADHD is disruptive, unfocused, has a short attention span and is prone to daydreaming. During lessons he always shouts out answers, cannot wait his turn, and finds it difficult to keep still. He does not like to listen and has difficulty carrying out instructions. (Participant 3)

My learner has a short concentration span; he is unable to focus on a given task, is disruptive and always interferes with and disturbs the other learners. He does not listen to instructions and he cannot follow through and complete written activities. He constantly looks for attention, is forgetful and never remembers where he left his books. He is disorganised. (Participant 4)

My learner who has ADHD is disruptive during my lessons. He can become aggressive and volatile when he does not get his own way and sometimes lashes out and at his peers and hurts them. (Participant 5)

He is easily distracted and he keeps looking around. He appears bored all the time.
(Participant 6)

My learner is disruptive during class lessons and he lacks concentration.
(Participant 7)

All the examples given by the participants' are common ADHD behaviour characteristics. The most common behaviour traits that are experienced by all 7 participants are that that their learners are distracting, disruptive and disturbing their peers. Educators need to address the basic characteristics of inattention, impulsivity and / or hyperactivity in learners with ADHD before they can instruct (Prouix- Schirduan, Shearer & Case, 2009).

4.2.2 How are these challenges experienced by the participant educators'?

I do not feel equipped and competent in teaching learners who have ADHD. (Participant 1)

I feel helpless at times when I teach learners who have ADHD. (Participant 2)

I feel competent in teaching learners who have ADHD however my class is overcrowded and this makes teaching these learners a very difficult task.
(Participant 3)

I have not been trained to teach learners who have ADHD and it is therefore very challenging. (Participant 4)

I do not have any specific qualifications to teach learners who have ADHD and do not feel I am dealing effectively with them. (Participant 5)

I am not trained to teach these learners and feel that more training is needed on how to teach learners with ADHD. Learners who have ADHD should be taught by remedial teachers. (Participant 6)

I am not equipped to deal with learners who have ADHD and would appreciate further teacher development on how to deal effectively with these learners. (Participant 7)

86% (that is 6 out of 7) educators feel incompetent in meeting the learning needs of learners who have ADHD. The educators lack training and the knowledge on how to teach learners with ADHD. Educator 3 feels competent in teaching learners with ADHD; however the large numbers in her class make this a difficult task. 86% (6 out of the 7) educators are challenged in meeting the needs of their learners who have ADHD. These participants are confronted with a learner whose internal barriers of inattention, impulsivity and poor concentration impact negatively on them, their peers and their educator. Since ADHD is often accompanied with co-morbidities this makes understanding each child unique and meeting their specific needs a challenging task for the educator. Coupled with this is the responsibility of the educator to provide an inclusive learning environment in an under resourced and overcrowded classroom. Studies indicate that even for a positive, disciplined and organised educator, it is very difficult and time consuming to maintain intervention strategies.

In order for educators to create an effective learning environment they need to start their lessons on time, minimize interruptions, limit time spent disciplining and use the time they have effectively (Slavin, 2009, p.359).This is no easy task, given the disruptive and demanding nature of ADHD. Adjusting the teacher/pupil ratio in these mainstream schools will provide educators with more time to effectively meet the needs of individual learners. The availability of relief teachers or a teacher aid may be helpful in providing "breathing spaces" for both the educator and the learner.

4.2.3 Are these needs of ADHD met in mainstream schools?

86% (6 of the 7) participants feel that the needs of the learners who have ADHD are not met in mainstream schools. This is due to the fact that mainstream educators are not skilled sufficiently to meet these learners' needs. 14% (1 of the 7) educators say the needs of learners with ADHD are sometimes met and this is made possible when a professional gives the educator intervention strategies that are beneficial and effective in dealing with the specific needs of each learner. Supporting further that professional intervention is necessary for the success of learners who have ADHD.

The participants unanimously agree that the needs of learners who have ADHD can be met by specialist intervention. They all report that these learners need teachers who are trained in remedial education to teach them. There are specific language and communication difficulties experienced by these learners that need to be addressed. Furthermore, the participants report that none of them are trained or skilled to meet the needs of learners who have ADHD. There

is an apparent need for professional intervention and professionals to work with and guide educators on effective teaching and behaviour strategies that could promote learning and behaviour. This intervention will have to come from the district support team as the Education Policy suggests that remedial or specialist teachers are not to be placed at each school, but at the district level, to be drawn upon by each school as required (EWP6, 2001, p.39).

The participant educators support the view that specialist educators can be helpful to schools. The insights that specialist educators have acquired over the years, their ability to identify the barriers to learning that are caused by various conditions and circumstances and (Bassey, 1999) their accumulated knowledge of strategies and interventions can be optimally used to overcome barriers to learning. This however does not hold true for inclusionists who do not trust specialist teachers. They argue that specialists will serve to undermine the efforts of mainstream educators and create inequalities amoung teachers as their presence will draw attention to their specialist skills and knowledge. Specialist educators will be seen as a barrier to the development of an inclusive practice (Farrell & Ainscow, 2002, p.152).

The participants feel that the large class group sizes in their mainstream schools need to be reduced. The Department of Education claimed that the provisional teacher-learner ratio in KwaZulu Natal be 1:31. Despite the efforts made to keep the post provisioning norm, these ratios do not reflect the actual sizes of classes and South African schools are still faced with large classes and teaching overloads (Baruth, 2009). The preparations of class lessons that would benefit learners who have ADHD require lots of time, supervision and available resources to be effective. The needs of learners who have ADHD are demanding and time consuming and sometimes to the exclusion of the needs of the other learners in the class. A suggestion was proposed by one of the educators for schools to allocate teacher aids to assist educators who teach learners with ADHD. This would alleviate the demands and the constant support expected from 1 or 2 learners in class and their educators would be able to attend to the needs of other learners in the class who could also be experiencing learning difficulties.
The participants reported the needs of their learners who have ADHD as follows:

Learners who have ADHD need remedial teachers to teach them. Teachers need to have available time to understand learners who have ADHD as they find it difficult to express themselves. (Participant 1)

We are not equipped to teach learners who have ADHD. Learners who have ADHD need specialist teachers as they find it difficult to concentrate and they also need lots of teacher support. (Participant 2)

Our school does not have educators who are able to deal expertly with learners who are diagnosed with ADHD. There is not enough time to explain concepts and to provide extra

support with worksheets. These learners need lots of routine and creating lessons that would benefit them is not practical in schools that have large class group sizes.
(Participant 3)

Mainstream educators lack the knowledge and training that is expected to address the needs of learners who have ADHD. There is not enough time to give individual attention to these learners. (Participant 4)

The needs of learners who have ADHD are only met when they are transferred to special schools. Learners who are aggressive have to be monitored constantly and they need an educator who is experienced in this behaviour. (Participant 5)

The needs of learners who have ADHD cannot be met in mainstream schools because class lessons need to be specifically tailored in order to cater for the cognitive difficulties in these learners. Time restraints and overcrowded classrooms make individual attention a difficult task. (Participant 7)

The most effective way to treat learners who have ADHD is by using a team or multimodal approach. This would involve a diagnosis followed by the the implementation and maintenance of effective interventions from various professionals and service providers (Rief, 2005). This is supported by one of the participants who reports:

The needs of learners who have ADHD can be met in mainstream schools when a professional gives an educator intervention strategies that will promote learning however these interventions are not always easy to implement in overcrowded classes. (Participant 6)

4.3 Theme 2

Intervention strategies used to teach learners with ADHD

The following questions guide the theme:

4.3.1 Bio - medical treatment as an intervention.

4.3.2 Teacher intervention strategies.

4.3.3 Are these intervention strategies effective?

4.3.4 What can be done to make these strategies effective?

4.3.1 Bio-medical treatment as an intervention strategy

Medication is the most common method of treating ADHD (Ingersoll, 1998). At school educators are sometimes required to give a top up of Ritalin or other medication to their learners who have ADHD. By taking medication a major barrier to learning is removed and if coupled with a classroom environment that supports the specific needs of the child with ADHD, academic achievement is possible (Watchtel & Boyette, 1998, p. 94).

The participants observed that stimulant medication such as Ritalin may not be a cure but helps to improve behaviour and productivity in learners. Research shows that medication reduces restlessness, improves focus, self - monitoring and accuracy and that learners who take medication would become less impulsive and less disruptive (Green & Chee, 1997, p.129). More than 150 controlled studies indicate that stimulant medication remains the most common method for treating ADHD (Ingersoll, 1998).

The results of a recent study in South Africa on the experiences of primary school teachers of learners who have ADHD concluded that medication addresses concentration difficulties thereby making learners more compliant and less challenging. It enabled the learners to concentrate for longer periods allowing educators more time to attend to the needs of the other children in class and in this way promoted the academic development of the entire class. The learners, who took medication performed better academically, socialised more appropriately and fewer unwanted behaviours were displayed (Kendall, 2008).

The participants' for this study reported their experiences of ADHD leaners that used medication as an intervention. Their responses were as follows:

The learner in my class who has ADHD is not on any medication. However my past experiences of learners taking medication are that it is effective as an intervention strategy. (Participant 1)

My learner is taking Ritalin twice a day. The medication helps at times. (Participant 2)

My learner is on Ritalin and goes for speech therapy. Medication and speech therapy help at times as the learner is able to complete some of the work prescribed for the school day. (Participant 3)

My learner is on medication but the medication is not always administered to him at home. When he does take his medication he is calmer and better able to concentrate. Even though his concentration may improve with medication, there are learning problems that he experiences that have not as yet been identified or diagnosed by his doctor. (Participant 4)

My learner is on Ritalin. The medication helped him focus but he was still very volatile, angry and dangerous and a treat to his peers and myself. (Participant 5)

Stimulant medication is ineffective in more than two thirds of learners diagnosed with ADHD who have co-existing mood or anxiety disorders. In fact behaviour, memory and attention can worsen with stimulants. Sometimes two or more medications are needed to treat these learners (Ingersoll, 1998, p.100).

None of the learners I have taught have been on medication. (Participant 6)

My learner is not on medication and I am not coping with his behaviour. (Participant 7)

Medication is the most common method for treating ADHD. Stimulants have been effective in treating 75-90 percent of children with ADHD. They address the core symptoms in ADHD which are hyperactivity, impulsivity, inattention, and associated features of defiance, aggression and oppositionality. They also improve classroom performance, behaviour and increase interaction with teachers, parents and peers (Rief, 2005, p. 36).

4.3.2 Teacher intervention strategies

Learners who have ADHD are a challenge in any classroom. These learners challenge the competence of even the most informed, skilled and caring educator. Educators need to constantly guard their emotions and responses and be empathetic when teaching learners with ADHD (Watchtel &Boyette, 1998).

Teaching methods are effective when they are used in conjunction with medication. Medication makes it possible for these effective techniques to work Medical, educational and behavioural interventions are effective when used in conjunction with each other rather than by using medication alone (Watchtel & Boyette, 1998, p. 63).

Non-medical interventions like behaviour therapy are used to remediate socially unaccepted behaviours. It involves a system of rewarding children for socially accepted behaviour. These methods are only effective for a short time and include parent training, teacher consultation, school behavioural interventions, daily report cards, cognitive behavioural skills training and educational remediation (Kaplan & Sadock, 1995).

The intervention strategies that the participant educators are using in their classrooms are:

I make the learner feel accepted show them that they are special. (Participant 1)

I give the learner individual attention. I praise them when they make an effort and seat them next to me. (Participant 2)

I speak firmly to my learner and maintain eye contact with him throughout our discussion or when I give him an instruction. After giving an instruction I ask the learner who has ADHD to repeat the instruction. I mention his name so that he is aware that I am watching him. I check up on the learner continuously, especially during group teaching, otherwise he will daydream the entire day. (Participant 3)

I reduce the written tasks that the learner who has ADHD must do and engage them in more practical activities. This keeps them interested and attentive. I try where possible to give individual attention. I constantly praise and reward positive behaviour. This motivates them and they feel special. (Participant 4)

My learner is extremely distracting and disruptive. He is also aggressive. He has difficulty interacting in a group and prefers sitting alone to colour in pictures. I am unsuccessful most of the day in the interventions that I use. My day is spent constantly ensuring that there is no conflict between my learner who has ADHD and his peers. He is in the process of being transferred to a special school. (Participant 5)

I provide him with worksheets from his previous grade. He is not coping with the work from the new grade. These old familiar worksheets from his previous grade calm him and he feels confident that he can do some work. (Participant 6)

I am still very inexperienced as an educator and often feel overwhelmed when dealing with learners who have ADHD. A method that I am using is that I maintain eye contact when I speak to him and ask him to repeat the instruction/s that I have given. (Participant 7)

4.3.3 The effectiveness of teacher intervention strategies

It is necessary for educators to build a repertoire of effective teaching strategies to manage and address behaviour in the classroom. Misbehaviour is usually triggered by something. Educators need to identify these triggers and minimise them and ensure that misbehaviour always results in a consequence (Rief, 2005). When the participant educators were asked on the effectiveness of the intervention strategies that they used in class, they reported:

The intervention that I use is effective at times. My learner needs lots of affirmation and needs to feel special; however, he is often quick to take advantage of me. (Participant 1)

Affirming my learner and praising him when he makes an effort is effective only some of the time. (Participant 2)

Maintaining eye contact, constant monitoring and observation is beneficial only some of the time. It is beneficial in that the learner is sometimes able to complete the prescribed work for the school day. (Participant3)

The interventions I use are not always possible and therefore not always successful. Most of the time I am able to reduce the written task of my learner, however, it is not always possible for me to engage in more practical activities with him. I am also not always able to provide him with the individual attention that he needs. The large class numbers make it difficult for me as an educator to give my learner the focus and individual attention that he needs. There is also a lack of available resources like, puzzles and games etc. that are needed to keep these learners occupied. (Participant 4)

The interventions I used were not always successful as my learner was constantly frustrated, demanding and aggressive. My primary focus was on maintaining peace and order amoung my learners and my success could be attributed to the times my learner who has ADHD sat quietly and engaged in some work. (Participant 5)

The intervention strategy I used of allowing him to complete worksheets from his previous grade was successful. This made my learner who has ADHD feel happy and kept him busy. (Participant 6)

The intervention strategies of maintaining eye contact with my learner who has ADHD was effective only temporarily. As soon as the learner sat down, he glared across the classroom or sat daydreaming. (Participant 7)

Giving praise to a learner who has ADHD is important but if praise is given too consistently it can be risky. If you reward a desired behaviour all the time and then suddenly stop, the desired behaviour will stop soon afterwards. According to Watchtel and Boyette (1998), the best rewards are random.

Studies indicate that, even for a positive, creative, disciplined and organised educator, it is very difficult and time consuming to maintain intervention strategies. In order for educators to create effective learning environments they need to start their lessons on time, minimise interruptions, limit time spending disciplining learners and use their time effectively (Slavin, 2009, p.359). This is not an easy task given the nature and characteristic traits of ADHD.

4.4 Theme 3

Support structures available to teachers who teach learners with ADHD

The following questions guide the theme:

4.4.1 What school based support is available?

4.4.2 What support do educators need?

4.4.3 What can mainstream schools do to meet the needs of learners diagnosed with ADHD?

4.4.4 What can class teachers do to promote learning for learners who have ADHD?

4.4.5 What is the outcome of learners who have ADHD?

4.4.1 What school based support is available?

Each of the participants report that they have access to a school psychologist and a school based support team. Participants 1 and 2 report that in addition to a school psychologist and a school based support team, a volunteer psychologist has availed her services to their school one day each week to assist with learner assessments and behavioural issues. The White Paper proposes that the Ministry will ensure that educators are trained and competent in addressing barriers to learning, and that they are able to provide life skills, counselling and support to their learners.

All the schools sampled have school-based support teams available and yet 3 of the 7 participants say that their school does not offer support to learners who have ADHD We can surmise that while support structures are available in all 3 schools the needs of the learner

with ADHD are not being supported. Depending on the demands of the learner with ADHD and the educators ability to meet these demands will indicate the type and amount of support that is needed to cope with the learning environment.

4.4.2 What support do educators need?

Example of the participants responses are:

I would like support on how to deal with and cope with learners who have ADHD (Participant 1)

I would appreciate parental involvement. (Participant 2)

I would appreciate smaller class sizes and better resources. (Participant 3)

I would appreciate it if the Department of Education could provide workshops and training on how to teach learners with ADHD. (Participant 4)

I would appreciate it if the school could make the arrangements for the psychological evaluation and assessment of learners. (Participant 5)

I would appreciate a loving and supportive school with a greater acceptance and understanding of ADHD by their peers. I would also appreciate it if parents were more involved and accepting of their children who have ADHD and refrain from shouting or continually finding fault with them. (Participant 6)

I would appreciate being equipped with better teaching skills that include meeting the needs of learners who have ADHD. I would appreciate better disciplinary measures put into place with regards to bullying and teasing. I would also appreciate better resources to be made available for these learners. (Participant 7)

The needs of the educator's vary. Some of the educators request the same support and others have individual requests. 42.9% (3 of the 7) participants mention intervention strategies or training on how to teach and cope with learners who have ADHD. 28.6% (2 of the 7) participants require more parental involvement and greater understanding and acceptance of learners who have ADHD by their parents. 28.6% (2 of the 7) participants need the school to ensure stricter discipline and a greater involvement in the process of referrals for psychological assessment and evaluation. 28.6% (2 out of the 7) participants mention the need for additional resources into the school that would benefit in learners who have ADHD. 14.3% (1 of the 7) participants mentions smaller class sizes. The most common request is the need to acquire intervention strategies and coping skills in educating learners who have ADHD. The lowest request made by the participants is the need for them to have smaller classes.

4.4.3 What can mainstream schools do to meet the needs of learners diagnosed with ADHD?

The participant educators were asked what they thought schools needed to do in order to meet the needs of their learners. Their responses were as follows:

I am not sure what mainstream schools can do to meet the needs of these learners. (Participant 1)

I have no idea what schools could do to meet the needs of learners who have ADHD. (Participant 2)

Schools can reduce the intake of learners so that class group sizes are smaller. Classes need to be better equipped with resources that would aid ADHD learning. Schools need to be equipped with computers and computer programmes that would prompt learners when working on particular activities. (Participant 3)

School rules must include methods of dealing with disruptive behaviours. Schools must endeavour to create a warm positive environment where all learners are treated fairly and without discrimination. The school needs to monitor learners who have ADHD learners constantly. They need to recommend assessment for these learners. The school must meet regularly with the learners' parents to discuss the progress of their children. (Participation 4)

The school is doing everything it can do to meet the needs of learners who have ADHD. (Participant 5)

The school needs to reduce the intake of learners in order to reduce class group sizes. The school can encourage educators to further their studies in special needs education. The school needs to facilitate workshops that will equip the educators with skills and methods of how to cope with the challenges that learners who have ADHD bring into the school. (Participant 6)

The school needs to encourage and promote the attendance of educators to workshops that would equip educators with the skills necessary to teach learners who have ADHD learners. The school needs to request or motivate from the Department of Education, the provision of an educator who would be specialised and know how to deal effectively with learners who have ADHD. The school needs to make provision for remedial teaching to be done at school. (Participant 7)

4.4.4 What can class teachers do to promote learning for learners who have ADHD?

ADHD can be managed effectively in the classroom when it is treated correctly. The participant educators have reported practical techniques that they have used to promote learning for learners diagnosed with ADHD.

Examples of their responses:

Educators need to foster a supportive network in the classroom between the learners who have ADHD and their peers. The educator needs to establish a relationship of trust between

her and her learner who has ADHD. Educators need to equip their learners with social skills in order to interact with their peers and adults.
(*Participant* 1)

Educators must monitor and encourage good eating habits amoung all their learners. Educators must establish loving and caring relationships with their pupils. Educators need to constantly praise and reward learners for their efforts regardless of how small. (Participant 2)

Educators must adhere to routine as this makes the learners feel secure. Educators need to be mindful of when they teach lessons that involve problem solving as these learners have difficulty in the areas of reasoning and planning. Educators need to provide lessons that are stimulating and interesting and make provision for a range of various activities. The educator must ensure that learners are actively engaged in classroom activities. When planning a lesson, the educator must make provision for practical activities. (Participant 3)

Lessons must be interactive, lively and fun. They must have lots of practical activities. A lesson must be structured in such a way that the more challenging lessons will be taught as early in the day as possible. Reward positive behaviour in order to encourage and motivate learners who have ADHD. Establish strict routine and enforce class rules so that the learners know what is expected of them. Ensure that the learner who has ADHD sits in front of the class. Constantly monitor learner's behaviour. Try to involve learners who have ADHD and keep them busy at all times. Give them chores or tasks to keep them occupied. (Participant 4)

Time out away from the other learners is necessary when learners become volatile and infringe on the safety of the other learners. These learners need special classes. (Participant 5)

Give the learners a lot of support. The school and the peer group need to be more understanding and supportive of learners who have ADHD. A greater acceptance and understanding of their difficulties need to be shown. Learners need to be kept busy with tasks or activities. (Participant 6)

I am not coping with my learner who has ADHD and cannot offer any suggestions. (Participant 7)

When ADHD is diagnosed and treated correctly it is a manageable disorder. Medication, behavioural techniques, psychological interventions and school modifications are all tools that make this possible. In order for the learner who is diagnosed with ADHD to make good academic progress, the learner, the parents, the teachers and the physicians need to work in partnership (Watchtel & Boyette, 1998).

Buddying with a partner teacher and exchanging ideas can reenergise educators. Observing other teachers and having a mentor/peer coaching assistant is also helpful. Keeping company with positive, supportive and progressive educators who are committed teachers and want to advance their skills and knowledge is necessary to staying motivated as an educator (Rief, 2005).

4.4.5 What is the outcome of ADHD learners?

Children do not outgrow ADHD as doctors believed previously; the disorder merely changes. During adolescence the symptoms of hyperactivity are transformed into an internal restlessness while inattention and impulsivity continue into adulthood. A learner who has ADHD needs to be treated their entire lifetime (Watchtel & Boyette, 1998).

28.6% (2 of the 7) educators report that learners who have ADHD drop out of the school system, 28.6% (2 of the 7) educators say that these learners are sometimes transferred to specials schools and 42.9% (3 of the 7) participant educators feel that learners with ADHD make slow academic progress, their learning potential is seldom reached and that they are largely reliant on medication. .

Studies indicate that students with ADHD frequently do not achieve their academic potential, are high risk for grade retention, drop out and are less likely to pursue post-secondary education. This underachievement is performance related and is not an ability deficit (Du Paul & Stoner, 2003). The participants' report their experiences of the outcome of learners who have ADHD as:

Learners who have ADHD are dependent on medication for the rest of their life. (Participant 1)

They take long to learn and their academic progress is very slow. (Participant 2)

These learners progress from grade to grade without ever receiving the educational expertise that they require. (Participant 3)

Some learners who have ADHD are identified and transferred to special schools like Browns. (Participant 4)

They drop out of school. (Participant 5)

Some learners are identified and transferred to special schools. These special schools are expensive and parents who wish to send their children to these schools need to be willing to meet the expenses of the school. (Participant 6)

These learners make slow academic progress and eventually become frustrated and drop out. They have anti- social behaviour and they lack goals. (Participant 7)

4. 6 Summary

This chapter has presented and analysed the data. The following chapter will conclude the study, indicating the limitations, implications and make recommendations for further research.

CHAPTER 5

ANALYSIS, IMPLICATIONS, LIMITATIONS AND RECOMMENDATIONS

Teaching is a way of being in the world that breaks through the boundaries of the traditional job and in the process redefines all life and teaching itself. – [William Ayers, cited in Fichtman & Yendol-Hoppey, 2009, p. 1]

5. Introduction

The purpose of this study was to investigate the issues and challenges that mainstream foundation phase educators face when teaching learners with Attention Deficit Hyperactivity Disorder (ADHD).

5.1 Summary

The results of the study reveal that mainstream educators do not feel sufficiently skilled, effective and confident in teaching learners with ADHD. Mainstream educators are not trained to meet the diverse needs of ADHD learners in the mainstream school. The needs of learners who have ADHD are not being met in mainstream schools and professional expertise, involvement, coaching and support is needed. Workshops need to be arranged and provision made for educators to learn how to teach learners who have ADHD.

The participating educators observed that medication such as Ritalin was helpful in improving the behaviour as well as productivity of learners who have ADHD. However, it was noted that Ritalin was the preferred choice in medicating the learners and was effective some of the time. Medication was helpful in addressing impulsivity, concentration and attention in the learners who have ADHD learners; however the learners were experiencing other learning difficulties and co-morbidities and these areas needed to be further investigated and dealt with. This is very challenging in itself more so for educators who are unskilled and untrained in dealing with this disorder and who are confronted with co-morbidities such as oppositional defiance disorder and conduct disorder.

A greater involvement between the learner who has ADHD, their physician, the parent and the educator is necessary in order for medication and behavioural techniques to work optimally so that effective learning can take place. Schools need to promote and support

parent teacher meetings and feedback with regards to learner assessment and interventions need to be monitored and followed through in class and on the playground.

The study reveals that the challenges that these mainstream educators have encountered all present as behaviour challenges that are typical of sufferers of ADHD. Coupled with these challenges were a lack of available resources, overcrowded classrooms, the need for more parental support, the need for workshops on effective intervention strategies in coping with learners who have ADHD and their challenges, a need for psychological interventions to be administered through the school, stricter disciplinary measures need to be promoted and followed by the school with regards to the misbehaviour of all learners, a school policy and a code of conduct that is accepting and supportive of learners diagnosed with ADHD..

The study reveals the various strategies and interventions that the 7 participants for this study use in order to address such learners' needs. Ritalin is the only medication that is used and all the educators make use of a number of behaviour management strategies according to their own experience and skill. The intervention strategies used without medication, yield short term results. Medication effectively addressed the impulsivity, concentration difficulties and hyperactivity of the learners. The educators request professional support and expertise in order to promote greater learning of their learners. An investigation into the possibility of allowing teacher aids to provide assistance to educators who teach learners that are diagnosed with ADHD.

Educators have revealed a general concern with regards to the following: the slow academic progress of learners who have ADHD, a desperate need for remedial teaching, the failure of learners who have been diagnosed with ADHD to meet academic demands, their dependence on medication for progression, their early school dropout rate, their accommodation in large class group sizes, the demands of learners with ADHD on educators, limited time to meet learners needs, difficulties in managing practical activities for large class groups, a lack of available resources and the need for computer prompting to help with focus and attention in learners who have ADHD.

5.2 Implications

For learning to be successful in mainstream schools, adjustments need to be made by all those concerned in the lives of learners who have ADHD. By providing the correct support and interventions necessary, the drop-out rate of learners with ADHD could potentially decrease.

The establishment of an accepting, understanding and informed classroom environment will hopefully spiral into a better understanding and acceptance of the disorder.

Greater support is needed in addressing the needs of learners who have ADHD. The careful planning of practical activities and workshops to inform, educate and equip educators in dealing with these learners is needed. Networking with other schools and arranging opportunities for educators to view specialist educators' methods of teaching and observe how they incorporate learners with ADHD inclusively into their lessons. There is a need for all educators to become trained and skilled in teaching learners with learning disorders, including those diagnosed with ADHD and an understanding in the co-morbidities that often accompany it is necessary. These would include the psychiatric co-morbidities of ADHD such as Oppositional Defiance Disorder, Conduct Disorder, Anxiety Disorders, Mood Disorders and Obsessive Compulsive Disorders and Tourette's Syndrome.

5.3 Limitations

- The findings of this study do not reflect the educational setting of all mainstream schools. Mainstream schools in South Africa have varying degrees of resourcefulness based largely on their previous privileged disposition in education, their accessibility to infrastructure and resources, and the various levels of teaching skills available in different schools. The class sizes across mainstream classes differ from school to school, as well as the availability of resources at school for these learners.

- This research was reliant on the honest and personal experiences of seven educators who may have responded with socially acceptable answers.

- As a novice researcher the research instruments chosen could possibly be improved on.

- The choice of a case study as methodology in this study, while convenient for the researcher, was not the most ideal choice of methodology as the small numbers are limiting and cannot be generalized to a larger population.

- Not much study on ADHD has been done in South Africa and it is possible that learning difficulties are greater as a result of socio-economic disadvantages and cannot be compared to those of developed countries.

5.4 Recommendations for further research

Research in the following areas is recommended:

- To study the possible ways of effectively improving the training and skills of all educators in mainstream schools in order to equip them to effectively meet the inclusive needs of learners who have ADHD (Donald *et al*, 2002).

- To address the over-crowding of classes in mainstream schools, its impact on learning, and provide effective ways to control and prevent this (Baruth, 2009).

- For district based support teams to ensure that there is sufficient professional support structures/services and resources available to support mainstream schools particularly the needs of the learners who have ADHD. The demands made on educators by learners who have ADHD is greater than those of other learners with special needs in that the learner who has ADHD requires immediate attention and intervention and if ignored can be a great distraction and disruption in class preventing himself and other learners from learning.

- To investigate practical ways to involve parents, the school and the community in the social context of addressing and meeting the needs of the child who has ADHD.

- To investigate the use of computer technology to assist learners with learning disabilities as well as learners who have ADHD (Ingersoll, 1998).

- To investigate ways in which mainstream schools can provide early intervention programmes and support networks for learners who have ADHD. These should include: Homework assistance, study skills assistance, extra reading and writing programmes, assistance from peers, assistance from tutors, assistance from parents or the community, the availability of activity clubs, service clubs, sport clubs, recreation clubs, creative and performing arts clubs (Rief, 2005).

5.5 Conclusion

In this chapter, the conclusions, limitations and suggestions for further research have been proposed. It concludes that educators have the responsibility of making their classrooms inclusive and to cater for the specific needs of all their learners. Learners who have ADHD can be very frustrating and tiresome for their educators, especially in the mainstream schools where class sizes are very large and resources are limited. They are very demanding; they require constant attention, immediate intervention as they can disrupt the entire learning

environment. These learners however can be managed in the mainstream class and teachers need to be equipped with skills and knowledgeable of the disorder and familiar with methods on how to teach learners who have ADHD. Support groups are necessary for all those involved in the lives of learners who have ADHD and time out will benefit the learner and his educator as will the assistance of a teacher aid. By implementing effective intervention strategies and providing the necessary support from all concerned, school can be a happy place for both educator and learner. Learners' need stimulant medication to deal with their concentration issues in the class room and this must be used in conjunction with non-medical intervention strategies. This multimodal approach has been proven to be effective in dealing with learners who have ADHD, rather than relying on medication alone.

The inclusion of learners who have ADHD cannot be realized without the support from many individuals, namely; the learner, their peers, the school, the family, the community and the Department of Education and Health. The proactive and available support from the above will create a positive image to the outside world, and facilitate a productive outcome and future for learners who have been diagnosed with ADHD.

An Optic View of ADD

If corrective lenses did not exist

No well-meaning parent could hope to resist

A pill that enabled their child to see

And increase that child's ability

For better sight and clear vision

No, this would not be a tough decision.

Then why wouldn't the same analogy

Apply to the problem of ADD?

For brains are a lot like eyes, I believe…

They both need to focus in order to see!

Medication as treatment might be prevented

If ADD lenses were someday invented.

[Karen Easter (1996) cited in Rief, 2005, p. 35]

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Appendix A1- Letter to the Principal

Worldview Primary School
The Principal
7 Hawks Bay Avenue
Durban
4000

The Principal
Mr. Smith

Dear Mr. Smith

APPLICATION TO DO RESEARCH AT WORLDVIEW PRIMARY SCHOOL

Permission is hereby requested to do research at Worldview Primary School for academic purposes.

I am a post-graduate student at the University of Kwazulu Natal (Edgewood Campus). I am conducting research on educators in the Foundation Phase who have taught learners with Attention Deficit Hyperactivity Disorder (ADHD).

The focus of my research is to understand and explore the unique experiences of Foundation Phase Educators of Mainstream Schools who teach Learners with ADHD and to understand the intervention strategies that they use.

I would therefore appreciate it if Foundation Phase Educators who presently have learners with ADHD in their classes or those educators who have taught learner(s) with ADHD, to kindly complete the questionnaire provided and submit it to me on my return to your school.

Please find attached a letter of permission from the Department of Education granting me permission to conduct this research at your school and be assured that any information that I gather for this research will be treated as confidential. The names of the participants as well as the name of your school will not be disclosed. You are also able to withdraw from the research at any time without any prejudice.

Your support is most valued as the findings of this study will encourage other educators to be flexible and explore different approaches in dealing with ADHD Learners, thus benefiting and improving the learning conditions in our schools through the early detection and recognition of learning disorders such as ADHD.

Thank You
M. O. Lawrence (Mrs.)

Appendix A2 - Principal Consent

Research Topic

"*To explore the issues and challenges that Foundation Phase Educators' face when teaching Learners who have Attention Deficit hyperactivity Disorder (ADHD).''*

I _____ (full name of principal)

hereby confirm that I am aware and have no objection to the school participating

in this research topic.

Signature of Principal Date

_____ _____

Thanking You

Yours in Education

M.O.Lawrence (Mrs.)

_____

Contact Details

Researcher:
M. Lawrence
Email: meryl.lawrence@telkomsa.net

My Supervisor:
Mr. H. N. Muribwathoho
University of Kwazulu Natal
Edgewood Campus

Appendix B– Educator Consent

I _____ (full name of Educator) give Mrs. Lawrence permission to use the information I have imparted to her for her research on ADHD. I have been assured of Mrs. Lawrence's confidentiality and understand that she will make every effort to disguise the identities of all the participants.

Signature of Educator Date

_____ _____

Thanking You

Yours in Education

M. O. Lawrence (Mrs.)

_____

Contact Details

Researcher:
M. Lawrence
Email: meryl.lawrence@telkomsa.net

My Supervisor:
Mr. H. N. Muribwathoho
University of Kwazulu Natal
Edgewood Campus

Appendix C – Parent Consent in English

My name is Meryl Lawrence. I am a post-graduate student at the University of Kwazulu- Natal (Edgewood Campus). I am conducting research on ADHD Learners in the Foundation Phase. I am asking for permission to observe your child in their classroom. I will be a passive observer and will not have any interaction with your child.

I will appreciate it if you will permit me to include your child in this study as the findings will hopefully assist educators in supporting other ADHD Learners. If you allow your child to participate, you can withdraw from this research without any prejudice.

Parent Consent

I, _____ (Full Name Printed),

am the parent / guardian of_____ (Name Of Child)

give consent to his / her participation in the research project.

_____ _____/_____/_____

SIGNATURE DATE

Researcher

Mrs. M.O. Lawrence
Email: meryl.lawrence@telkomsa.net

Supervisor

Mr. H.N. Muribwathoho
Email: Muribwathoho@ukzn.ac.za

Appendix D – Parent Consent in Zulu

Ifomu Yemvume

I gama lami ngingu Meryl Lawrence, ngingumfundi Kwazulu-Natal, Edgewood Campus. Ngenza ucwaningo kwezengqondo, ukweluleka abafundi ezimeni ezinzima abadlula kuzo noma ababhekene nazo.Lolu cwaningo ngilwenza ezikoleni zama banga aphansi Foundation Phase.

Ngicele imvume yakho ukubuka ingane yakho ekilisani.Ucwaningo lwami aluzu kuphazamisa izifundo futhi angizukuxhumana ngqo nomtwana wakho.

Ngingajabula uma ungavumela umtanakho abe yingxenye yalolucwaningo ngoba imiphumela izosiza othisha ukusiza abantwana abane ADHD.

Uma umvumela umtwana wakho abe ingxenye yalokhu, unelungelo lokumkhipa uma usufisa nga-phandle kokuhlukunyezwa.

Ucwaningo luyimfihlo, amagama abantwana nezikole zabo ngeke zivezwe.

Ngiyabonga.

Ifomu Yemvume

Mina _____ (amagama aphelele)

umzali ka/umbheki ka _____ (igama lengane)

ngiyavuma ukuthi ingani yami ibe yingxenge yalolucwaningo.

_____ _____/_____/_____

ISIGINESHA USUKU

Researcher
Mrs. M. O. Lawrence
Email: meryl.lawrence@telkomsa.net

Supervisor
Mr. H. N. Muribwathoho
Email: Muribwathoho@ukzn.ac.za

Appendix E – Educators' Questionnaire

Biographical Details

Name / Optional

_____

Sex

_____

Race

_____

Qualifications:

_____

Teaching Experience in years

_____

Number of learners in your class

_____

Number of Foundation Phase learners' in your school

_____

EDUCATORS QUESTIONNAIRE

SECTION A

1. Have you taught any learners who have ADHD?

Yes / No

If yes, how many?

_____

2. Do you presently have any learners in your class who have been diagnosed with ADHD?

Yes / N o

If yes, how many?

_____

3. In your opinion, do these learners need additional teaching or specialist teaching?

Yes / No

Elaborate

_____

_____

_____

4. What is your knowledge of the outcome of these learners who have ADHD?

_____

_____

_____

_____

5. Do you think these learners have been properly diagnosed?

Yes / No

Why do you say so?

_____

_____

_____

_____

6. Have any of the learners that you have taught been on medication?

Yes / No

Specify their medication or therapy if any.

_____

_____

_____

7. Do learners with ADHD present any challenges to you in your classroom when teaching?

Yes / No

If yes, what are these challenges?

_____

_____

_____

_____

_____

_____

8. Do you make use of any strategies or techniques when you teach these learners?

Yes / No

If yes, what strategies or intervention techniques do you use?

_____

_____

_____

_____

_____

_____

Are they effective?

Yes / No

Explain why / why not?

_____

_____

_____

9. Does your school offer you any support for learners who are diagnosed with ADHD?
Yes / No

Elaborate

_____

_____

_____

_____

_____

10. What type of support would you appreciate when you have learners with ADHD in your class?

_____

_____

_____

_____

_____

_____

11. Do you feel that you are equipped to deal effectively with learners who have ADHD?
Yes / No

Why do you say so?

_____

_____

_____

_____

12. Have any of your learners been screened prior to their placement in you classroom?

Yes / No

If yes, what were the criteria for placement?

_____

_____

_____

_____

_____

13. Are you aware of any Foundation Phase educators at your school who are trained in Special Needs Education?

Yes / No

If yes, what is their job description at your school?

_____

_____

_____

14. Does the school psychologist assess any of the foundation phase learners?

Yes / No

If yes, are learners with ADHD included in these assessments?

_____

_____

_____

15. In your estimation, are the needs of ADHD learners being met in your school?

Yes / No

Why do you say so?

_____

_____

_____

_____

_____

16. Can you offer any practical suggestions as to how your school could meet the needs of learners with ADHD effectively?

_____

_____

_____

_____

_____

_____

_____

17. Can you offer some practical suggestions on how to manage learners who have ADHD in a mainstream classroom?

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for taking part in this questionnaire. Your experiences and suggestions are most valued and appreciated.

Sincerely

Meryl Lawrence

PS: Should you have any queries concerning this questionnaire please feel free to contact me.

Appendix F – Connors Teacher Rating Scale

Appendix G - *A Vignette*

Recognizing Hyperactivity by:

Taylor, E. (1997) *Understanding your hyperactive child: The essential guide for parents.* United Kingdom: Random House.

Betty

Hyperactivity - or a troublemaker?

Betty was suspended from school at the age of seven. Her teachers said that she was friendly and cheerful, but made the classroom impossible for anybody else. Her loud singing, constant chatter and dashing about disrupted other children; her own progress was held up because she could not or would not settle to any one thing. Her teachers tried in several ways to help her to begin with numbers and reading, but she made no progress in spite of seeming articulate and intelligent.

Other children disliked her and thought she was silly, so she had no friends: but she kept on being over friendly and bossy towards the others. She was tested by a psychologist, which in itself was difficult because she was so distractible. Nevertheless, when an adult kept her on a single puzzle she could do it very well, and scored above the average on an IQ test.

Several kinds of diet were tried at home. All of them worked for a few days when started, but none of them had any lasting effects. Her parents and brothers always found her to be boisterous, full of pranks, and rather self-centered, but had been able to manage well until her education started to go wrong. Then her mother became very wretched and started to blame herself for all Betty's problems. However, both parents had been able to tolerate with little matters and firm big ones, and had probably helped to prevent her from becoming more emotionally distressed than she was.

Treatment began a few months later. Betty started part-time in a small special class; the teacher broke the learning down into small, attainable steps that could be done quickly. Betty attended the clinic to learn self-control techniques, and her parents learned how to help her to practice them and to reward her successes. Her increasing self-confidence helped her to cope with a regular class again, in a different school, and there she made friends happily. She is still something of a tomboy. But she can learn, cope with the teacher's expectations in terms of discipline, and be popular. It was important for Betty that her problems were recognized and helped. As a label, "Hyperactivity" seemed to be substantially more helpful than her previous label of "troublemaker". Sometimes, hyperactivity isn't really the problem…..

APPENDIX H

Appendix H – Permission from the Department