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THE EXPRESSION OF FRUSTRATION BY THE CHILD WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER WITHIN THE CLASSROOM SETTING: A SOCIAL WORK STUDY

by

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Submitted in partial fulfilment for the degree

MAGISTER SOCIALIS DILIGENTIAE
(PLAY THERAPY)

In the Department of Social Work

Faculty of Humanities

University of Pretoria

SUPERVISOR: MRS H BAULING
MAY 2004

KEY TERMS

Middle Childhood

ADHD (Attention Deficit Hyperactivity Disorder)

Hyperactivity

Frustration

Aggression

Classroom setting

Behaviour

Research

Development

Learning problems

SUMMARY

The expression of frustration by the child with attention deficit hyperactivity disorder within the classroom setting: a social work study.

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The researcher aimed in this study to answer the research question: how is frustration expressed by the child with attention deficit hyperactivity disorder (ADHD) in middle childhood within the classroom setting? The goal of the study was therefore to explore the expression of frustration in the child with ADHD in middle childhood within the classroom setting.

The research population consisted of all children in middle childhood years who had been diagnosed with ADHD and were attending either Arthur Matthews or Montrose Primary Schools. The sampling method was purposive as subjects with these specific attributes were utilized. The extent of the investigation was limited to the observations of 20 children.

The exploratory design was used in order to complete the empirical study. A checklist was used for the purpose of gathering data. This data was quantitative information on frustration expressed by children with ADHD in middle childhood, as observed by the researcher.

Research results indicate that frustration plays a large role in the school life of a child diagnosed with ADHD. The findings also show that the child with ADHD directs much of his/her frustration towards him/herself. The research findings indicate that frustration that is not dealt with at an early stage will develop into aggression. In order to assist a child in dealing with his/her frustration, it is recommended that the child be taught coping mechanisms which assist him/her in ventilating frustration in a socially acceptable way.

Further research into the effective implementation of teaching coping mechanisms to children in middle childhood with ADHD within the classroom setting is recommended.

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CHAPTER ONE: GENERAL INTRODUCTION

1.1 Introduction

The researcher is very aware of the difficulties experienced by both teachers and parents of children with Attention Deficit Hyperactivity Disorder (ADHD). The diagnostic criteria for ADHD according to the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1994) involve the child experiencing symptoms of inattention and hyperactivity - impulsivity which have persisted for more than six months to a degree that is maladaptive and inconsistent with the child's developmental level. The researcher is also aware of the complications that are accompanied by ADHD and the seriousness involved as it affects the child's education through him/her not being able to fully concentrate in order to comprehend lessons or instructions (Picton, 2002:4,20). Some of the long term complexities which can develop in the child's life as a result of ADHD involve the child being socially isolated or having a low-self esteem and therefore never reaching his/her full potential. The researcher realizes the importance of early intervention as discussed by Schwiebert, Sealander and Dennison (2002:3). The researcher feels this would involve assisting each child who has been diagnosed with ADHD to find the most effective way to deal with his/her frustration, thus enabling him/her to concentrate better in class, and reducing his/her aggression towards fellow classmates on the playground.

The researcher is aware that sufficient knowledge does not exist on how professionals can best help a child with ADHD to deal with their frustration within a classroom setting (Picton, 2002:xii). In order for this problem to be addressed, it is necessary for the researcher to explore frustration and how it is expressed by children in middle childhood with ADHD.

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This chapter will focus on the proposed area of research that will be undertaken by the researcher. It will also look at the problem formulation, the aim and research question of the study as well as the research approach, design, procedure and strategy, the type of research and the ethical issues that will be involved. The research population, sampling methods and key concepts will also be defined.

1.2 Motivation for the choice of the subject

The researcher is very interested in the implications frustration has on the ability of a child to function both within an educational and a social setting. Having worked within a school setting, the researcher is very aware of how frustrated children with ADHD are within a classroom setting. The researcher feels that this topic needs to be addressed as a lack of knowledge exists between the relationship of frustration and ADHD, and yet it affects the daily functioning of many children, and the implications of it are carried through to adulthood. Early intervention is crucial to prevent academic underachievement and negative effects on the lives of children affected by ADHD (Schwiebert, Sealander & Dennison, 2002:3).

Within the social setting, the child with ADHD is often teased by his/her classmates because he/she is not like them and doesn't fit in. The child is also often teased as he/she cannot cope with his/her work at school due to a lack of concentration. The child is often disliked and ridiculed causing him/her to become angry and aggressive thus affecting his/her ability to make friends. Often children with ADHD feel that nobody understands them (Picton, 2002:17,20). It is therefore important for the researcher to be able to gain an understanding of the frustration experienced by the child through monitoring his/her aggressive behaviour within the classroom setting. From a social work perspective, effective conclusions and recommendations can only be offered once clear observations have been made. For the purposes of this research, it is essential that the information gathered is not subjective information from the teachers as many

teachers do not perceive children with ADHD in a positive light (Picton, 2002:17). Subjective views may not be accurate observations of the child's behaviour.

1.3 Problem formulation

According to Sheppard (1998:45), it is estimated by most researchers that six to eight percent of the population have been diagnosed with what is now called ADHD (Attention Deficit Hyperactivity Disorder). Children with ADHD find it difficult to concentrate in class. They often get into trouble for disrupting the class, or not following instructions, thus becoming frustrated as they find concentration impossible (Picton, 2002:4). There is no time within a teacher's schedule to really sit down with a child to discover what is causing their frustration, and teachers of children with ADHD also experience significantly greater levels of stress in working with these children (Greene, Beszterczey, Katzenstein, & Park, 2002:5). With many children, this frustration is not even recognised, the child is merely classified as a 'difficult' child, and this label continues to follow him/her through school. The frustrated child tends to become aggressive in play, thus isolating himself/herself from other children who choose not to play with him/her (Picton, 2002:17).

ADHD is signified by pent-up frustration, difficulties in socializing and learning problems (Sheppard, 1998:45). By assisting a child in dealing appropriately with his/her frustration there should be a marked improvement in his/her ability to concentrate within the classroom setting. It must be noted, however, that scientists estimate that as many as forty percent of individuals with severe attention deficit problems also have other learning disabilities (Sheppard, 1998:45).

It must be noted that less frustration will reduce the child's need for the defence mechanism of aggression, thus increasing his/her ability to make friends. The behaviour modification that would take place in a child's life through the reduction of frustration will affect every aspect of his/her life, including his/her home life and

therefore relationships with parents, siblings and other family members (Picton, 2002:103).

To summarise, a child with ADHD is hyperactive and unable to concentrate on individual tasks. This threatens the child's self-confidence and obviously affects the child's ability to cope with school work resulting in him/her experiencing frustration. The child begins to feel isolated as he/she feels different. Children within the classroom setting recognise that this child is different and tend to ridicule him/her. This frustrated child retaliates with aggression which further isolates him/her socially and emotionally thus creating a vicious circle within which he/she functions and from which he/she finds it impossible to escape.

The researcher focused on exploring this frustration through objectively observing the behaviour of children who have been medically diagnosed as having ADHD. With objective data, effective conclusions and recommendations could be made to offer the child, his/her family and his/her teachers assistance.

1.4 Aim of the study

1.4.1 Goal of the study

The researcher aimed to explore the expression of frustration in the child with ADHD in middle childhood within the classroom setting.

1.4.2 Objectives of the study

- To obtain a theoretical frame of reference regarding ADHD, frustration and the development of a child during middle childhood.

- To conduct a quantitative empirical study to observe the frustration expressed by children diagnosed with ADHD within the classroom setting.

- To make conclusions and recommendations for the benefit of social workers, parents and teachers from both the literary and empirical studies on the expression of frustration by the child with ADHD in middle childhood within the classroom setting.

1.5 Research question

As this is an explorative study, a research question was being utilized. Quantitative research makes use of relatively specific questions or hypotheses which remain constant throughout the investigation (Fouché & Delport, 2002:80). The research question was appropriate for this research as the aim of this research was to discover whether frustration co-exists with ADHD in middle childhood and how this frustration is expressed within the classroom setting.

The research question for this study is the following: *How is frustration expressed by the child with ADHD in middle childhood within the classroom setting?*

1.6 Research approach

The researcher selected to use a quantitative research approach as it is best suited to the specific research goals and objectives of this research (Fouché & De Vos, 2002:148). A quantitative study is an inquiry into a social or human problem, based on testing a theory consisting of variables, measured with numbers and then analysed with statistical procedures in order to determine whether the theory holds true (Creswell, 1994:1-2). The researcher's role in quantitative research is that of the objective researcher. Quantitative data collection methods usually involve measuring instruments (Delport, 2002:165). Measurement in quantitative research focuses on specific variables which are quantified through rating scales, frequency counts and other means (Fouché & Delport, 2002:80). Quantitative research will enable the researcher to gather measurable data so that statistical conclusions can be made, and is therefore most appropriate for an explorative study (De Vos, Fouché & Venter, 2002:222).

The purpose behind the researcher selecting to utilise the quantitative approach was that the researcher aimed to avoid obtaining subjective views. Subjective opinions would sway the validity of this research.

1.7 Type of research

Applied research is aimed at solving specific policy problems or at helping practitioners accomplish tasks. It is a practical type of research and addresses immediate problems facing the professional in practice (Fouché, 2002:108). The goal of applied research most often is the scientific planning of induced change in a troublesome situation. This is relevant for this research project as the researcher needed to understand the full extent of frustration experienced by children with ADHD within the classroom setting in order to be able to make conclusions and recommendations which could induce change in the future.

1.8 Research design

Research designs can be described as groups of small, worked-out formula's from which one or more can be selected or developed by researchers (Fouché & De Vos, 2002:138). The researcher utilized an exploratory design. The purpose of an exploratory study according to Bless and Higson-Smith (1995:42) is to gain insight into a person, community, situation or phenomenon. According to Rubin and Babbie (2001:123), this purpose is typical when:

- a new interest is being examined by the researcher;
- the subject being researched is relatively new and unstudied;
- the feasibility of undertaking a more careful study is being tested by the researcher;
- the researcher aims to develop methods to be utilised in an advanced study.

The researcher chose the exploratory design as the purpose of this research is exploratory in nature. This design enabled the researcher to gain insight into the

phenomenon of frustration and how it relates to children with ADHD within the classroom setting.

1.9 Research procedure and strategy

The researcher used a checklist for the purpose of data gathering (Delport, 2002:184). The researcher chose to utilize the checklist as it would give quantitative information on frustration expressed by children with ADHD in middle childhood, as observed by the researcher. The extent of the investigation was limited to classroom observations of a minimum of 20 children who have been diagnosed with ADHD. The data was gathered through the utilization of a checklist, completed by the researcher (See appendix 1).

In order to conduct this explorative study, the researcher gained permission from the Department of Education and from the principals of Arthur Matthews and Montrose Primary Schools (See appendix 2,3 & 4). The researcher then obtained assistance from the school in identifying children in middle childhood years who have been professionally diagnosed with ADHD. Once this sample group was identified, the researcher contacted the parents of these children in order to obtain permission to continue with the research (See appendix 5). The parents needed to be aware that the researcher would be completing a checklist on their child based on objective observations of how their child expresses frustration within the classroom setting. The parents needed to agree to this, prior to the researcher completing the checklist.

The data was analysed by the researcher once it had been gathered. There are numerous ways in which data can be analysed. The researcher felt that the most effective technique for the purposes of this research would be to analyse the data manually. According to De Vos, Fouché and Venter (2002:223), if the units of analysis are relatively small, statistical analyses can be performed manually. Once the data was analysed, the results were placed on pie charts and histograms. The researcher felt this would be the simplest and most effective way

of presenting the various components and their relationship to the whole (De Vos, Fouché & Venter, 2002:234).

1.10 Pilot study:

1.10.1 Literature study

The researcher utilized both national and international sources from the Academic Information Centre at Pretoria University. Literature from Education Departments as well as from the internet were also utilised.

1.10.2 Consultation with experts

The researcher had a discussion with Mrs M. Main who is a qualified primary school teacher with a specialization in children with minimal brain dysfunction. She previously worked at Pikkieland Nursery School where she was approached by a number of parents who had concerns about their children who had been diagnosed with ADHD. Mrs M. Main is currently working at Arthur Matthews Primary School.

Discussions also took place with Mrs M. Helsby, a qualified remedial teacher and social worker from The Lighthouse Playschool. Although the children she generally works with are younger than five, the effect of ADHD on a child's behaviour is already clearly noticeable at this early stage in the child's life, and already affects the child's age appropriate level of concentration noticeably.

The researcher conducted further consultation with experts through:

- discussions with Heather Picton from the Hyperactive Support Group and also working in the capacity of a private consultant for children diagnosed with ADHD.
- consultation with psychologist, Mrs M. Dick who diagnoses children who may be ADHD.

- discussions with teachers at Arthur Matthews and Montrose Primary Schools on their experiences of ADHD within the classroom setting.
- discussions with parents who are the experts on their own children.

Consultations with these experts ensured that the nature of ADHD was better understood. This ensured that when conclusions and recommendations were made after completion of the research, that it would be most beneficial to social workers, teachers and parents giving them new insight into ADHD and their dealings with the child with ADHD within the classroom.

1.10.3 Feasibility of the study

This study was not too complex as the diagnosis of ADHD in children is relatively common. It was therefore possible to obtain a wide sample of children with ADHD. As the child's level of concentration not only affects the child in school, but also at home, the researcher felt that the parents would most likely be willing for their children to be a part of the study. The results of the study would be directly beneficial to them in a parenting capacity. The researcher also needed to obtain permission from the principals of Arthur Matthews and Montrose Primary Schools for the research to be conducted at these schools (See appendix 3 & 4).

The researcher needed to ensure that the parents of the selected children were aware of the purpose of the research, and that they were happy to give permission for the researcher to complete the checklist on their child through observations within the classroom setting (See appendix 6).

The costs incurred for this research were negligible, being petrol costs and the cost of printing the checklist that was utilized as a data collection method. These costs were carried by the researcher.

1.10.4 Pilot test of checklist

Once the researcher's checklist was completed, it was tested by being completed by the researcher while observing two children with ADHD who were not included in the study. The researcher took into account any difficulties experienced with the checklist, so that amendments could be made for the final draft of the checklist to be used for the empirical study.

1.11 Description of the research population

The universe refers to all the potential subjects who possess the attributes in which the researcher is interested. The term population is utilized to set boundaries on the study units, thus referring to individuals in the universe who possess specific characteristics (Strydom & Venter, 2002:198).

1.11.1 Boundary of sample

The universe for this study was all children diagnosed with ADHD. The population consisted of children in middle childhood years who have been diagnosed with ADHD and are currently attending Arthur Matthews or Montrose Primary Schools. Due to the fact that subjects with these specific attributes were utilized for this study, the identified sampling method was purposive sampling.

1.11.2 Sampling method

The researcher utilized purposive sampling which is classified as non-probability sampling. Purposive sampling is based entirely on the researcher’s judgement. The researcher composed a sample of elements containing the most characteristic, representative or typical attributes of the population (Strydom & Venter, 2002:207). For the purpose of this study, the researcher composed a sample of 20 children:

- in middle childhood;
- who have been professionally diagnosed with ADHD;
- who are currently attending Arthur Matthews or Montrose Primary Schools.

The researcher completed a checklist on each child professionally diagnosed with ADHD in their own class in order to gain objective information on how frustration is expressed by these children within the classroom setting.

1.12 Ethical issues

1.12.1 Harm to experimental subjects and / or respondents

The subjects were not at risk of either physical or emotional harm as they were not directly involved with the gathering of data (Strydom, 2002:64).

1.12.2 Informed consent

As the subjects were minors, their parents were asked to sign consent for their child to be observed within the classroom setting (See appendix 5). The researcher also needed to first obtain permission from the Department of Education and from the principals of Arthur Matthews and Montrose Primary Schools (Strydom, 2002:65).

1.12.3 Deception of subjects and/or respondents

As the researcher was exploring frustration and how it is expressed by children with ADHD within the classroom setting, the subjects and their parents were informed clearly as to the purpose of the study. There was no reason for deception (Strydom, 2002:66-67).

1.12.4 Violation of privacy/anonymity/confidentiality

The information obtained through the utilization of a checklist was respected as being confidential. The subjects' privacy was not violated as their names were not used in the research report and won't appear in any publications which may follow. Any documentation that does have the subjects name on will be destroyed upon completion of the research project. (Compare Strydom, 2002:67-68.)

1.12.5 Actions and competence of researchers

The researcher is currently completing this research for a Master's degree and received regular supervision from a qualified and experienced supervisor from the University of Pretoria. The researcher honoured the ethical guidelines set out in social science research (Strydom, 2002:69).

1.12.6 Cooperation with contributors

Due to the fact that this research project was not expensive and formed part of the formal studies of the researcher, financial contributors were not necessary - no sponsors were required (Strydom, 2002:70-71).

1.12.7 Release or publication of the findings

The information received from the outcome of this research will be published in a mini-dissertation and in the form of a scientific article in an accredited journal. The confidentiality of all the subjects will be respected. The publications will be as accurate and as objective as possible (Strydom, 2002:71).

1.12.8 Debriefing of respondents

A brief newsletter informing both the teachers and the parents of the results of the study will be sent out to them. This information will be of interest to them as it will help them to gain insight into the frustration experienced by children with ADHD within the classroom setting. Formal debriefing was not necessary (Strydom, 2002:73).

1.13 Limitations of the study

The problems and limitations of the study were as follows:

- It was not possible to assess all the children during the same school period.
- The research could have been more effective if each child was observed over a period of time.
- Outside influences could not be controlled such as what might have happened in the child's home the day they were observed, or what might have happened at break time.
- Some of the children were observed in classrooms with teachers they have a poor relationship with.
- Some of the teachers were much more negative towards children with ADHD than others which has an effect on the child's behaviour.
- The researcher was aware that her presence within the classroom could have an impact on the behaviour of the respondents.

1.14 Definitions of key concepts

1.14.1 ADHD

According to Welch (1999:2,6), ADHD is a description of behaviour and not an explanation for it. ADHD highlights three behaviours, namely: inattention, impulsivity and hyperactivity.

Attention Deficit Hyperactivity Disorder describes children who are highly impulsive, have difficulty concentrating on anything for more than a few minutes and are prone to outbursts or fits of frustrated rage (Sheppard, 1998:45).

The researcher sees ADHD as being the inability to apply one's mind, experiencing a lack of order or confusion while simultaneously being abnormally

active.

1.14.2 Frustration

Frustration is the feeling that accompanies an experience of being thwarted in attaining your goals (WordNet, 2003).

Frustration occurs when one feels annoyed or discouraged because they cannot achieve what they want to (Cambridge Advanced Learner's Dictionary, 2003).

The researcher would define frustration as the build up of emotion within one due to the inability to achieve their desired goal.

1.14.3 Middle childhood

Middle childhood is the period between the ages of about six to twelve years and is considered the most critical period for the development of a child's self image, as well as his development cognitively, socially, and emotionally. During this period, the school's contribution to the development of the child should not be underestimated (Louw, Schoeman, Van Ede & Wait, 1998:311).

Middle childhood is the period between six years old and puberty when the major task is industry, ability, initiative and achievement versus inferiority (West, 1996:191).

The researcher would define middle childhood as the vital period in a child's life between the ages of six to twelve years in which the foundations are being laid for how the child will adapt and function in adulthood.

1.14.4 Expression

When you say what you think or show how you feel using words or actions (Cambridge Advanced Learner's Dictionary, 2003).

Lively or vivid representation of meaning, sentiment or feeling (WordNet, 2003).

The researcher defines expression as being able to portray meaning as to how one feels, through words and actions.

1.14.5 Classroom

A classroom is a room in a school where lessons take place (WordNet, 2003).

A classroom is a room in a school or college where groups of students are taught (Cambridge Advanced Learner's Dictionary, 2003).

The researcher defines a classroom, in the context of this research, as a room where a group of children gather to be taught together by an adult teacher.

1.15 Contents of research report

Chapter 1: General Introduction

Chapter 2: Literature study on ADHD and Frustration

Chapter 3: Literature study on Middle childhood

Chapter 4: Empirical study on the relationship between ADHD and frustration in middle childhood

Chapter 5: Conclusions and recommendations

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CHAPTER TWO: ATTENTION DEFICIT HYPERACTIVITY DISORDER AND FRUSTRATION

2.1 Introduction

In this chapter the researcher will look at what is meant by the definition and classification of the attention deficit hyperactivity disorder in order to gain a better understanding as to what it is, how it has developed, how it is diagnosed and in which ways children with this diagnosis can be assisted. The researcher will also look at how aggression, the external expression of frustration, is inter-linked with ADHD and other negative implications such as academic and social difficulties and low self-esteem.

2.2 Attention deficit hyperactivity disorder

According to Thompson and Rudolph (2000:491), the cluster of problems known as attention deficit hyperactivity disorder (ADHD) creates a very complex childhood problem and is the cause of the most frequent referrals for professional help. Children are clinically diagnosed as having the attention deficit hyperactivity disorder if they are excessively active, unable to sustain their attention, and are deficient in their impulse control to a degree that is deviant for their developmental level. The prevalence of ADHD is approximately 3% to 7% of all school-age children. (Compare Thompson & Rudolph, 2000:491-492; ADHD: Definition, Diagnosis, Prevalence, 2003; Picton, 2002:3; Center for Disease Control, 2002:7.)

2.3 Myths about ADHD

Public perceptions of ADHD are full of myths, misinformation and misconceptions about the nature, cause and treatment of this disorder. Popular misconceptions suggest that ADHD is not a disorder at all, or that at minimum, it is a benign

disorder that is over-diagnosed. Critics often state that children are unnecessarily medicated by parents who have not properly managed their disruptive, unmotivated or underachieving children. Some even suggest that "a growing intolerance of childhood playfulness may in fact be leading to more and more children being labelled with ADHD" (Panksepp, 1998: 91). Critics hardly ever present evidence-based arguments and they frequently suggest that professionals are harming otherwise normal children by diagnosing and treating them for ADHD (Myths about ADHD, 2003).

2.4 The history of ADHD

According to Loewenton (2000), in 1902, George Still identified a group of 20 children in his clinical practice whom he diagnosed as having a deficit in "volitional inhibition". Still described many of the diagnostic criteria of ADHD used today:

- the male to female ratio being about 3 to 1;
- the incidence of criminal conduct, depression and alcoholism occurring amongst the biological relatives;
- a hereditary predisposition to the disorder in some cases;
- the possibility of the disorder also being linked to an acquired injury to the nervous system. (Compare Thompson & Rudolph, 2000:492; History of the Disorder, 2003.)

Many children who survived the encephalitis epidemics of 1917 and 1918 were noted as having behavioural problems similar to those comprising ADHD as it is diagnosed today. This became recognised as the brain-injured child syndrome that became applied to children manifesting the same behavioural features, but without evidence of brain damage. This gave rise to the concept of "minimal brain damage", later leading to the term "minimal brain dysfunction" (MBD) being utilised. (Compare History of the Disorder, 2003; Picton, 2002:3.)

In the 1950's and 1960's, an interest developed in the more specific behaviours of poor impulse control and hyperactivity. The condition was labelled as the "hyperkinetic impulse disorder" and was attributed to cortical overstimulation due to the poor thalamic filtering of stimuli entering the brain. A shift away thus occurred from the conclusion that such symptoms indicated brain damage, towards a more descriptive view of the disorder giving rise to the diagnostic term "hyperactive child syndrome". This was said to be typified by the daily motor movement far in excess of that seen in normal children of the same age. Researchers of this era continued to believe that the condition had some sort of neurological origin. However, due to the influence of the psychoanalytic thought during this time, along with the belief that mental disorders of children arose as a reaction to various environmental factors, particularly early events in the family life of the child, led to the description in DSM-II (Diagnostic and Statistical Manual of Mental Disorders) of "hyperkinetic reaction of childhood". This was briefly defined as: "this disorder is characterised by overactivity, restlessness, distractibility, and short attention span, especially in young children; the behaviour usually diminishes in adolescence." (Compare History of the Disorder, 2003; Picton, 2002:3.)

By the 1970's, research began to emphasize the importance of problems existing with sustained attention and impulse control in addition to hyperactivity (History of the Disorder, 2003).

In the 1980's, a more complex understanding of the disorder noted four major deficits:

- the investment, organization, and maintenance of attention and effort;
- the ability to inhibit impulse of behaviour;
- the ability to control levels of arousal to meet with situational demands;
- the unusually strong inclination to seek immediate reinforcement. The disorder was renamed the "attention-deficit disorder" (ADD) in 1980 in the DSM-III. More detailed criteria were now provided which included symptom lists and cutoff scores recommended for each of the three major symptoms

(hyperactivity, impulsivity, inattentiveness) in order to assist with the identification of the condition. The DSM-III now distinguished between two different types: that with hyperactivity and that without it. The current diagnostic model in DSM-IV allows for the separate diagnosis of symptoms relating to hyperactivity, impulsivity and inattentiveness. (Compare History of the Disorder, 2003; Picton, 2002:3.)

During the 1980's and 1990's, research challenged the accepted notion that ADHD was primarily an attention disturbance (History of the Disorder, 2003).

In the 1990's, it appeared that problems with the response inhibition and motor system control were more reliably demonstrated and were more specific to this disorder than were problems specific to attention. It seemed that hyperactivity and impulsivity were not separate symptoms but instead, a single dimension of behaviour referred to by Barkley (1997) as disinhibition. This research led to the current existence of two separate lists of items and thresholds for ADHD when the DSM-IV diagnostic criteria were published: one for inattention, and another one for hyperactive-impulsive behaviour. This has led to the diagnosis of three sub-types of ADHD: ADHD-C, combining attention and hyperactive-impulsive; ADHD-I, predominantly inattentive type; ADHD-HI, predominantly hyperactive impulsive (History of the Disorder, 2003).

2.5 Diagnostic criteria for ADHD

The diagnostic criteria for ADHD according to the American Psychiatric Association (1994) are listed below. The numbers 2.5.1, 2.5.2, 2.5.3 have been added by the researcher for clarification.

"A. Either 1 or 2

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

2.5.1 Inattention

(a) Often fails to give close attention to details or makes careless mistakes in schoolwork, 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 schoolwork, 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 (eg, toys, school assignments, pencils, books, or tools).
(h) Is often easily distracted by extraneous stimuli.
(i) Is often forgetful in daily activities.

2) Six (or more) of the following symptoms of hyperactivity-impulsivity have persisted for at least 6 months to a degree that is maladaptive and inconsistent with developmental level:

2.5.2 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 is expected.
(c) Often 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 often acts as if "driven by a motor."
(f) Often talks excessively.

2.5.3 Impulsivity

(a) Often blurts out answers before questions have been completed.
(b) Often has difficulty awaiting turn.
(c) Often interrupts or intrudes on others (eg, butts into conversations or games).

B. Some hyperactive-impulsive or inattentive symptoms that caused impairment were present before 7 years of age.
C. Some impairment from the symptoms is present in 2 or more settings (eg, at school, work or at home).
D. There must be clear evidence of clinically significant impairment in social, academic, or occupational functioning.
E. The symptoms do not occur exclusively during the course of a pervasive developmental disorder, schizophrenia, or other psychotic disorder and are not better accounted for by another mental disorder (eg, mood disorder, anxiety disorder, dissociative disorder, or personality disorder).

- **Attention-Deficit/Hyperactivity Disorder, Combined Type:** if both criteria A1 and A2 are met for the past 6 months**.**
- **Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Type:** if criterion A1 is met but criterion A2 is not met for the past 6 months**.**
- **Attention-Deficit/Hyperactivity Disorder, Predominantly Hyperactive, Impulsive Type:** if criterion A2 is met but criterion A1 is not met for the past 6 months." (Compare American Psychiatric Association, 1994; Thompson & Rudolph, 2000:491-492.)

2.5.4 Developmental variation: Impulsive/hyperactive behaviours

According to the American Academy of Pediatrics (1996), activity during middle childhood may be high in play situations and impulsive behaviours may normally occur, especially in peer pressure situations. High levels of hyperactive/ impulsive behaviour do not indicate a disorder or problem if the behaviour does not impair the child's functioning. The child plays active games for long periods

and may occasionally do things impulsively, particularly when excited. Also, for the infant and young child activity and attention are closely linked to the interactions between the child and caregiver for example, when sharing attention and playing together.

Activity and impulsivity normally increase when the child is tired or hungry and decrease when the child is not. Activity normally increases in new situations or when the child is anxious. Familiarity thus reduces activity. It is important to see both the child's activity and impulsivity in the context of the caregiver's expectations and the level of stress experienced by the caregiver. When expectations are unreasonable, the stress level is high, and when the parent has an emotional disorder (especially depression), the adult may well exaggerate the child's level of activity/impulsivity. Activity level is often a variable of temperature. The activity level of some children is at the higher end of the scale of normal from birth and may continue to be high throughout their development (American Academy of Pediatrics, 1996).

2.5.5 Developmental variation: Inattentive behaviours

In middle childhood the child may not continue for very long with an activity which the child does not want to do such as reading an assigned book, completing homework, or completing an activity which requires concentration such as cleaning something. Some parents have a low tolerance for inattention which is developmentally appropriate. Although watching television cartoons for extended periods of time appears to reflect a good attention span, it does not reflect longer attention spans due to the fact that most television segments only require short (2- to 3-minute) attention spans and are very stimulating. Normally, attention span varies greatly depending upon the child's interest and skill in the activity. This happens to the extent that a short attention span for a particular activity may reflect the child's skill or interest in it (American Academy of Pediatrics, 1996).

According to Thompson and Rudolph (2000:492), when children are diagnosed with ADHD, it is important that both the intensity and the duration of their

symptoms, as well as how these fit into the child's developmental pattern, are considered.

2.6 Description and symptoms

2.6.1 Inattention

Children diagnosed with ADHD have less ability to concentrate, to respond to tasks, play activities and to follow-through on rules and instructions in comparison to children of the same age who have not been diagnosed ADHD. They are also more disorganized, distracted, and forgetful. The child with ADHD is less persistent in completing boring activities, such as continuous performance tasks. These children are not generally more distracted by external events occurring while they are performing a task, although they may lose concentration if irrelevant stimuli are embedded within the task itself. The symptoms may first be recognised between the ages of five to seven years, although sometimes only being recognised later, especially in the case of the predominantly inattentive type of ADHD (Description and Symptoms, 2003).

2.6.2 Hyperactive-impulsive behaviour (Disinhibition)

Compared to children of the same age, children diagnosed with ADHD are objectively more active, less mature in controlling their motor overflow movements, have less ability to stop ongoing behaviour, talk more and interrupt others' conversations. They are also less able to resist immediate temptation and delay gratification, and they respond too quickly, as is seen in impulsive errors on continuous performance tests. Differences in impulsiveness and activity are found between children with learning disabilities, those with ADHD and those with other psychiatric disorders. The symptoms for this type of ADHD are first observed around three to four years of age. The child's symptoms relating to hyperactivity-impulsivity will typically decline in severity with their advancing age. Symptoms relating to inattentiveness are more persistent, but generally seem to decrease by adolescence. This pattern may well be due to the expectations of

normal behaviour and demands made upon children at various ages. Children under 3 years old are normally more impulsive and hyperactive as until they enter school, very few serious demands for sustained attentiveness and task completion are made of them (Description and Symptoms, 2003).

2.6.3 Other characteristics: situational and contextual factors

Children with ADHD display a greater variability than normal children in their achievement on continuous performance tasks. But it is important to note that their symptoms vary in context with the child diagnosed as being ADHD being able to play video games for prolonged periods of time, but not being able to sustain attention in schoolwork or chores. These children often show improved performance on laboratory tasks in the presence of an adult. They may experience difficulties with the extent of restraint demanded from them in specific contexts. They can be distracted by the level of stimulation within different settings and may not always think through the immediate consequences associated with the task. Some executive function impairments which they may experience include: motor coordination, sequencing, digit span and mental computation, planning and anticipation, verbal fluency, effort allocation, organizational strategies in tasks, internalization of self-directed speech, adhering to restrictive instructions, self regulation of emotional arousal, less mature or diminished moral reasoning (Description and Symptoms, 2003).

2.7 Causes of ADHD

The conclusions arrived at by the NIH Consensus Development Conference on Diagnosis and Treatment of Attention Deficit Hyperactivity Disorder (1998), were that although nothing is known with regard to the causes, ADHD is a real disorder. Since knowledge of the causes of ADHD are only speculative, it is not possible to create strategies for prevention. As yet, no clear physiological or neurological correlates of the disorder have been identified. Brain scans and EEGs have been inconclusive in helping to identify the possible cause of ADHD.

(Compare NIH Consensus Development Conference, 1998; Causes of ADHD, 2003.) Some researchers have found that brain scans have revealed that children diagnosed with ADHD have smaller brain volumes than children without the disorder. Various anatomic brain abnormalities have also been reported in children diagnosed with ADHD. This decreased size in brain volume does not seem to be related to the utilisation of stimulant medication (Pain and Central Nervous System Week, 2002:17).

Researchers continue to disagree about the causes of ADHD with factors such as neurological injury during birth, vitamin deficiencies, food additives and genetic inheritance having been suggested. (Compare Thompson & Rudolph, 2000:492; Picton, 2002:9.) Future exploration is warranted as hereditary hyperactivity is moderate to high and has been linked to specific genes. (Compare Wolke; Rizzo & Woods, 2002:1059; About ADHD, 2003.)

According to Picton (2002:9) three medical / physiological theories have been proposed based on the different factors identified by researchers as possible causes of ADHD. These are the neurotransmitter imbalance, underactivity of the frontal lobes and essential fatty acid deficiency.

2.7.1 Neurotransmitter imbalance

Messages from perceptual organs such as the ears, eyes and skin move towards the brain along specific neuronal pathways. The message has to cross a minute gap between two cells when it moves from one neuron to the next. The efficiency of how this happens is based on the neurotransmitters which are in fact biochemical substances. While some neurotransmitters have a calming effect, others have an excitatory effect. Nerve endings produce the neurotransmitter which is required for each message and then immediately reabsorb it once the message has been relayed. A neurotransmitter is considered to be in short supply if the body produces too little of it, or reabsorbs it too quickly. A neurotransmitter imbalance is therefore able to affect the functioning of the child.

Drug therapy attempts to target this neurotransmitter imbalance in order to correct it (Picton, 2002: 9-10).

2.7.2 Underactivity of the frontal lobes

The frontal lobes are the part of the brain involved in regulating the behaviour and intellectual activities. In children diagnosed with ADHD, the frontal lobes are underactive. Resulting from this, a lack of control exists in the higher centres of the brain which are associated with memory, impulse control, reasoning with respect to the consequences of actions and the ability to pay attention. Drug therapy or medication is prescribed in order to stimulate the frontal lobes into functioning more effectively (Picton, 2002:10).

2.7.3 Essential fatty acid deficiency

Picton (2002:10) notes that eating patterns do not always ensure an adequate intake of essential fatty acids (EFA). These acids are important nutrients required for healthy tissue production. A deficiency can manifest in different conditions such as eczema and a tendency towards hyperactivity and allergies.

As a result of an EFA deficiency, hyperactive children have inferior cell wall structures in the skin and other tissues which result in a constant, slow loss of moisture through the skin. This moisture which is constantly being lost must be replaced which explains the tremendous thirst often experienced by ADHD children. In a similar way, the cell walls in the brain have an inferior structure and messages from the ears and eyes do not always reach the brain intact. These messages may go astray, or arrive in a somewhat ‘scrambled’ form. This could explain why children with ADHD don’t seem to be able to remember a string of instructions (Picton, 2002:10).

According to Picton (2002:12), by removing substances from the diet that may block the formation of EFA’s, and supplementing the diet with the necessary nutrients, a healthier tissue production is encouraged. Children that are most

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likely to benefit from a diet which corrects the EFA deficiency tend to be those who suffer from allergies, have skin problems and drink vast amounts of liquid.

2.8 Diagnosis of ADHD

There is no single test used to diagnose ADHD. It is therefore necessary in order to establish a diagnosis, to rule out all other causes and determine either the presence or absence of co-existing conditions. This evaluation should be composed of a clinical assessment of the individual's social, academic and emotional functioning and their developmental level. A careful history should be gathered from the parents, teachers and if appropriate, from the child. Professionals often use checklists for assessing ADHD symptoms and ruling out other disabilities (About ADHD, 2003).

There are a number of different professionals who can diagnose ADHD, which include school psychologists, private psychologists, neurologists, psychiatrists and other medical doctors. No matter who evaluates the child, the use of the Diagnostic and Statistical Manual IV criteria is necessary. A medical examination by a doctor is important and should also include a thorough physical examination, which includes hearing and vision tests, to rule out any other medical problems which may cause symptoms similar to ADHD. In some rare cases, children with ADHD may also have thyroid problems. Medical doctors are the only professionals who can prescribe medication if it is needed (About ADHD, 2003).

According to Picton (2002:12), some doctors follow strict guidelines and utilise certain criteria for diagnosing hyperactivity. A certain amount of subjectivity will creep into the diagnosis, meaning that the diagnoses from two different doctors may not always concur. Some doctors feel that any child displaying sufficient behavioural symptoms of hyperactivity is hyperactive no matter what the child's situation or environment. Other doctors prefer to first eliminate other possible factors before making a diagnosis. These factors include:

- Severe emotional stress which could affect the behaviour and the learning ability of the child.
- A partially deaf child cannot always hear the teacher's instructions clearly and so is often seen as being defiant, difficult and slow. With their deafness treated, these children can improve dramatically.
- A child with sleep apnea struggles to breathe the moment they enter a state of deep sleep, which causes them to wake up. The child is therefore constantly tired and cannot get a good nights' sleep. This affects both behaviour and performance.
- A lesion in the frontal lobes of the brain can lead to hyperactive behaviour. Brain damage caused by an illness such as meningitis and encephalitis can have the same effect.
- A child who is constantly hungry and underfed can also display symptoms of hyperactivity (Picton, 2002:12).

2.9 Treatment for ADHD

A physical examination is important as part of the diagnostic process, followed by professionals supervising medications as necessary. According to Thompson & Rudolph (2000:492), Ritalin, Dexedrine and Cylert are medications which are currently the most common form of treatment. Problems exist, however, as these drugs have unwanted side-effects occurring in young children. Most professionals also do not recommend medication as a sole treatment. It is important that if the child is medicated, other professionals such as teachers who are working with the child are made aware in order for them to offer feedback about the effects (Thompson & Rudolph, 2000:492).

Psychostimulants are the most common type of medication for the treatment of ADHD related symptoms. Approximately 70 to 80 percent of all children with ADHD respond positively to psychostimulant medications (About ADHD, 2003). Significant academic improvement involving increased attention and concentration, compliance and effort on tasks, amount and accuracy of

schoolwork produced and decreased activity levels, impulsivity, negative behaviours in social interactions and physical and verbal hostility is shown by children who take this type of medication. Other medications that may decrease hyperactivity, impulsivity and aggression include certain antidepressants and anti-hypertensives. It is important though for each family to weigh the pros and cons of taking such medication (About ADHD, 2003).

According to the NIH Consensus Development Conference (1998), stimulants can yield positive results when they are used in a clinically rigorous and conservative fashion along with psychosocial therapies such as behaviour modification and parent training. Currently, the treatments which exist address only core symptoms, and provide little improvement to academic or social outcomes. The NIH Consensus Development Conference (1998) therefore contradicts About ADHD (2003) which claims significant academic improvement. At present, long-term assessments of the values of the various treatments have not been conducted. There is currently no data available on the treatment of the inattentive type of ADHD, which mostly seems to affect more girls. Alternate treatments which range from dietary adjustments to biofeedback, have been utilised with varying results. A wide variety of opinions exist amongst practitioners with regards to the diagnosis and treatment of ADHD, with most primary care physicians diagnosing and prescribing medications more readily than specialists. Adverse effects of medication exist and are related to dosage.

Some non-medicated treatments include the child attending group counselling where the child can learn more effective social skills. Parent groups and family counselling sessions can be very beneficial to parents, especially during the initial assessment period while the parent is still dealing with their child's diagnosis. A parent training programme could also be useful, including general information about ADHD, it's causes and possible treatment, how to assist the child with self-esteem development, skills in listening and encouraging and social support. Physical activities to help the child deal with their activity level and

bibliotherapy are also considered to be beneficial forms of treatment (Thompson & Rudolph, 2000:493).

Serious consequences may exist for children with ADHD who do not receive treatment or receive inadequate treatment. These consequences are numerous and may include low self-esteem, social and academic failure and a possible increase in the risk of later antisocial and criminal behaviour. Treatment plans should be targeted at meeting the specific needs of each individual and their family. Treating children with ADHD therefore often requires intervention on medical, educational, behavioural, and psychological levels. (Compare About ADHD, 2003; Picton, 2002:5.) According to Turgay, Morgan and Ansari (2002:4), effective treatment of ADHD can prevent the development of conduct disorder.

2.10 Prognosis for children with ADHD

Children diagnosed with ADHD are potentially at-risk for serious problems such as academic underachievement, school failure, difficulty getting along with peers, and problems dealing with authority. Up to 67 percent of children will also continue to experience symptoms of ADHD into adulthood. It is important to note though that with early identification and treatment, children can achieve. Studies have shown that when children receive adequate treatment for ADHD they tend to have fewer problems with school, peers and substance abuse, and they show improved overall functioning, in comparison to those not receiving treatment (About ADHD, 2003). It is interesting that about half of all children who have been diagnosed with ADHD have also been identified as having learning disabilities (Center for Disease Control, 2002:7).

2.11 Differing views of experts

According to Loewenton (2002), ADHD is seen by Breggin as primarily being a normal response of children to the situations in which they find themselves, and a symptom of a society that finds it easier to control children chemically than trying

to understand why they are behaving as they are. He also feels it is as a result of faulty and indiscriminate diagnosis. Barkley (in Loewenton, 2002) has described a theory of ADHD as being a neuro-physiological deficit in children diagnosed with it, and he has described the identifying symptoms in a formal, theoretical way.

According to the NIH Consensus Development Conference (1998) there probably is a real disorder, mediated neurologically if not ultimately being of neurological origin. It is characterized by a lack of attention control, which afflicts a few people. This condition most likely arises during early childhood, reacts positively to medication, and could be hereditary. Currently, the medical and scientific communities have little idea as to what its causes are. The diagnosis which properly belongs to this rare disorder, has now become fashionable. It is now applied, along with the fashionable treatment, to a wide range of behavioural clusters, many of which cannot properly be called symptoms at all, but are rather a set of behaviours at an extreme of the normal range of behaviour for children, especially boys.

Alternately, behaviours which are often labelled as ADHD are very often likely to be the child's response to their highly stressful environment at school, at home, or in both places. It seems to make sense, and is very likely that drug companies, doctors, therapists and parents with disturbed or difficult children see in this vaguely defined disorder an opportunity in which to enhance their own self-interest. The result is a huge financial cost to society and possibly children that are permanently damaged. (Compare NIH Consensus Development Conference, 1998; Center for Disease Control, 2002:7; Health and Medicine Week, 2003:14.)

According to Dick (2003), an educational psychologist, she has not had a single child in the last five years who has been diagnosed with ADHD. When they are referred to her with what are thought to be the symptoms, Mrs Dick refers them to a neurologists for tests. The diagnosis of all show that the children had a

neurological disorders of sorts, which could be medicated specifically. None of these children were diagnosed with ADHD itself (Dick, 2003).

Picton (2003) is very clear that most of the behavioural symptoms of a child displaying signs of ADHD are in fact linked to the child's diet. For most children, she feels that diet is the answer for behaviour modification as opposed to medication (Picton, 2003).

2.12 The link between aggression/frustration and ADHD

Frustration is the feeling that accompanies an experience of being thwarted in attaining your goals (Wordnet, 2003). It occurs when one feels annoyed or discouraged because one cannot achieve what one wants to (Cambridge Advanced Learner's Dictionary, 2003). Frustration most often results in aggression which is the external expression of frustration. Chronic and serious aggressive behaviour is commonly associated with ADHD (Turgay, Morgan & Ansari, 2002:4).

The primary symptoms of ADHD which include inattention, impulsivity and hyperactivity, automatically place a child at increased risk for a host of problems including the possible development of aggression as they become older. Highly aggressive children are often diagnosed according to DSM-IV (American Psychiatric Association, 1994) as meeting the criteria for conduct disorder. This diagnosis is often comorbid occurring most commonly with the diagnosis of ADHD (Cavell, 2000:8,10). Parents of children with untreated ADHD symptoms find it very difficult to manage the child's behaviour. This causes an increase in negative and coercive interactions that can lead directly to the child developing aggressive behaviour (Loeber, 1990:39). Children with ADHD are more likely to use inappropriate verbal and body language to vehemently express how they are feeling (Ramer & Gordon, 2002:26).

According to Reis (2000:175), teachers often berate children diagnosed with ADHD for their lack of attention in class, talking out of turn and fidgeting which distracts other children in the class. Disciplinary conflicts involving teachers and children diagnosed with ADHD may negatively affect a child's academic progress, and could even lead peers to form negative views about the disruptive child. The overactivity and impulsivity of a child can interfere with their play interactions and thus their acceptance amongst their peers. The frustrated child tends to become aggressive in play, thus isolating himself/herself from other children who choose not to play with him/her (Picton, 2002:17). The acquisition of basic academic skills can be interfered with by the child's inability to sustain attention. This pent-up frustration can be internalised causing the child to develop a low self-esteem and therefore never reaching his/her full potential (Schwiebert; Sealander & Dennison, 2002:3). This can increase the risk of the aggression-prone child experiencing academic failure, peer rejection and can thus lead them to involvement with deviant peers (Dishion, Patterson, Stoolmiller & Skinner, 1991:172; Loeber 1990:1). The researcher notes that there are five important aspects, linked to the expression of frustration by a child with ADHD within the classroom setting, which need to be assessed. These include:

- How the teacher reacts towards the child.
- How classmates react towards the child.
- How the child reacts towards him/herself.
- How the child reacts towards his/her classmates.
- How the child reacts towards his/her teacher.

According to Hinshaw and Anderson (1996:113), another way in which the interaction between ADHD and aggression can be viewed is by recognising that hyperactivity without co-occurring aggression, while still causing some adjustment difficulties such as academic problems, is far more benign than when accompanied by aggressive behaviour.

When working with aggressive children it is important to assess for symptoms of ADHD as childhood aggression and ADHD frequently co-occur. Impulsivity and

hyperactivity have been implicated in the etiology of aggression, yet parents and teachers often fail to appreciate the distinction between childhood aggression and ADHD. Teacher ratings of ADHD symptoms are often inaccurate and spuriously inflated when coercive behaviours such as oppositional and conduct problems are present. Teacher's ratings are more accurate when these coercive behaviours are not present (Cavell, 2000:22-23).

2.13 Summary

ADHD is a very complex disorder with a large number of variations causing treatment to be very complex. The exact causes of the disorder have not yet been ascertained, but the problems experienced are very real. Although a great deal has been researched and written about ADHD, many unanswered questions remain. Aggression, which is the external expression of frustration, is closely intertwined with ADHD as children struggle to express themselves, have little or no self-esteem and struggle to achieve both academically and socially.

Children with ADHD create complications both within the classroom setting and in their homes as their behaviour is complicated and difficult to control. Discipline is often very difficult to enforce as these children often do not take consequences of their actions into consideration. The variety of symptoms in children diagnosed with ADHD are so varied, often leading to a misunderstanding of the child. This leads to a build up of frustration in the child, often resulting in aggressive, uncontrolled behaviour.

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CHAPTER THREE: MIDDLE CHILDHOOD

3.1 Introduction

Middle childhood is the period existing between about the sixth and twelfth year of life. It has been agreed upon by psychologists that this is a period of relative calm in a child's physical development, but a critical period for development of a child's social, emotional, cognitive and self-concept development (Louw, Schoeman, Van Ede & Wait, 1998:311).

According to Kowaleski-Jones and Duncan (1999:931), children around the age of six or seven begin to show skills and characteristic modes of behaviour and thought which are significantly different from previous periods. Children during this period take previously acquired personal and social knowledge and become involved in the process of consolidating, extending and integrating it. These changes are manifested in the increased capacity for problem solving and the initial capacity to form intimate relationships. Very importantly, middle childhood illuminates the emergence of typical behaviours and heterogeneous capacities. It is therefore recognised as the period of change involving dimensions such as physical maturation, peer attachment and emotional identities. These elements will all be discussed in this chapter.

3.2 Social development

In middle childhood social development takes place as the social world of a child has been broadened to comprise of parents, peers and school. Children begin to move away from their dependence on family and adults during this period. They become increasingly interested in their peer relationships, wanting to be accepted and effective in their interactions with other children. Their perception of their own competence is now related to their peer relationships. Social interest is high during this period of development, and social skills are critical for positive outcomes at school and in life in general (Bronson, 2000:222-237).

The overactivity and impulsivity of a child with ADHD can interfere with their play interactions and thus their acceptance amongst their peers. This can lead to the child with ADHD being rejected by their peers (Dishion, Patterson, Stoolmiller & Skinner, 1991:172; Loeber, 1990:1).

Relationships with peers give the child a sense of reassurance and support as they move into a larger and less familiar world. Being able to fit in and do what others do appears to be a safety net as well as a challenge. At this stage children are capable of making and abiding by rules, but these are often applied rigidly, or even punitively. When in competition, children's understanding of rules can be overcome by the child's desire to win (Bronson, 2000:222-237).

3.2.1 Family interactions

Interactions with siblings and the extended family may provide a pathway from early childhood attachments to the development of friendships within middle childhood (Levitt, Guacci-Franco & Levitt, 1993:811). Siblings may also help one another's environments within the family by serving as models and reinforcers of sex-typed behaviours as well as by serving as sources of social comparison (McHale, Crouter & Tucker, 1999:1003).

According to East (1991) (in Franco & Levitt, 1998:315-319) children who are sociable in middle childhood report more supportive relationships with their parents than do withdrawn or aggressive children. Children with higher levels of family support also report higher levels of friendship quality in respect of a reciprocated best friend. A shift occurs in middle childhood from a seeming willingness on the child's behalf to tell their mother everything, to an unwillingness to share many things with her as they become more dependent on their friends (Watson & Valtin, 1997:448).

3.2.2 Awareness in interaction

During this period of development a child's horizons expand dramatically and the child is exposed to many new social learning experiences which can have a profound effect on their development. A child begins to move away from egocentrism and towards being more sensitive to others. A child's perception of other people gradually begins to change. The child begins to realize that thoughts and perceptions differ from person to person, that differences can occur between a person's intentions and what a person actually does, and that the same event can be experienced differently by various people. Children also begin to realize that the way in which they behave causes other people to react in a particular way for example, they will help their mother when they wish to ask her for something. This development equips a child much better for dealing with the demands which arise from social participation (Louw, Schoeman, Van Ede & Wait, 1998:359-360). In middle childhood, children are able to reflect on their own behaviour and the behaviours of others as well as the consequences of these behaviours in the environment (Bronson, 2000:227).

3.2.3 Friendship

According to Louw, Schoeman, Van Ede and Wait (1998:361), middle childhood brings about the inclination to interact with other children of the same age and sex. It is a time when children wish to be included in small groups and to become true and loyal friends. This interaction reflects similarity in interests, as well as cognitive development of themselves and their friends.

During middle childhood children become more consciously aware of themselves and their interactions with others. They become more vulnerable to the judgements of others, and particularly to the judgements of their peers. Children begin to compare themselves with other children and realize that in order to be liked and accepted it is necessary for them to conform to certain rules and regulations and to display a level of emotional control. As children increase their involvement in peer-related activities, they become increasingly influenced by the

norms of the group. Children do not want to be left out or to be thought of as being different in some way. Peer acceptance is extremely important to children from middle childhood onwards. Peer rejection is related to a lack of social competence and frequent aggression (Bronson, 2000:223-224). According to Louw, Schoeman, Van Ede and Wait (1998:361), children interact with other children for the purposes of general fellowship, friendship and affection, while child-adult interaction is generally based on the child's need for care and protection.

Children's friendships contain two objectives which consist of spending time together doing the same activity and interacting for the purpose of achieving common goals. As children feel more secure and are freer with their friends, it is normal for them to display more frequent agreements and more frequent disagreements with these friends in settings that require them to interact. Conflict in middle childhood occurs mostly within close relationships. The vast majority of these conflicts encompass the relationships with friends, siblings and parents. Children in middle childhood understand that conflict can be expected in friendships and during this period disagreements become increasingly salient between friends. (Compare Hartup, French, Laursen, Johnston & Ogawa, 1993:445; Joshi & Ferris, 2002:70.) The ability of children to resolve conflicts with their peers is a crucial factor in determining the level of acceptance or rejection the child will experience by their peers. Peer rejection can increase the risk of social maladjustment which is indicated through delinquency and substance abuse (Rubin, Bukowski & Parker, 1998:619).

3.2.4 Behaviour and expectations

Children's behaviour and expectations in primary school are influenced by the child's early social experiences. These early experiences are transformed into internalised models used for self-guidance and affect the way the child behaves and interprets the behaviours of others. The ongoing self-directed behaviour of children is guided by their expectations about the social and physical environment and their own capabilities within it. Their interpretations of the

behaviour of others is filtered through these perceptions, creating a tendency for previous patterns of action and reaction to recur (Bronson, 2000:224). Children's attributions in social situations influence their behaviour, which influences their relationships and ultimately influences their social adjustment (Joshi & Ferris, 2002:66).

The relations between children's social competence and prosocial behaviour are complex. They do, however, suggest that although prosocial behaviours are related to social competence, pro-social status and social acceptance are not conceptually equivalent. Pro-social behaviours directed towards peers are more supportive of relationship building as opposed to pro-social behaviours observed by adults which are more closely linked with cooperation and obedience. Behaviours that maintain and initiate relationships may become of increasing importance to children in middle childhood as they make the transition from dependence on their family to reliance on their peer group.

According to Greener and Crick (1999:349), children function in asymmetrical power relationships with their parents, and are expected to abide by an existing system of social expectations. On the other hand, through reciprocal interactions with their peers, children need to learn to negotiate a system of mutual understanding and to establish a sense of connectedness with other children.

Behaviour and social interactions become even more complex in children with attention deficit hyperactivity disorder (ADHD). The majority of children with ADHD have an inability to meet the demands of the world which are complex and chronic. This often leads to the existence of secondary emotional and behavioural problems (Goldstein, 2003a).

Recent research suggests that at least 70% of children with ADHD also experience at least one secondary learning, emotional or behavioural problem. Many of these problems are as a result of the inability of children with ADHD to do what other children their age are capable of doing (Goldstein, 2003a).

3.2.5 Free-time activities

According to McHale, Crouter and Tucker (2001:1764), the everyday activities of children are important developmental phenomena, because the way in which children spend their time in middle childhood could have implications and opportunities for them later on in life. The complexity and content of their everyday activities can also be seen as an index of the psychological growth of the child.

Free-time activities bring children into contact with their peers and adults who share similar interests. By spending time in mutually enjoyable activities, feelings of closeness and affiliation are fostered resulting in positive implications for the psychological well-being of the child (McHale, Crouter & Tucker, 2001:1766).

The self-direction, discipline and sense of competence that accompanies playing a sport or working on a hobby is congruent with the developmental need for a sense of 'industry' in middle childhood. By investing the necessary time to become skillful and knowledgeable in a particular activity defines for a child their uniqueness. This sets the stage for the child's development of identity (McHale, Crouter & Tucker, 2001:1774).

In comparison to the positive implications of hobbies or sports, time spent hanging out or playing outdoors is linked to less-adaptive functioning generally resulting in reduced academic achievement and increased conduct problems. The negative implications of hanging out have been studied in terms of their links with delinquency in adolescence (McHale, Crouter & Tucker, 2001:1774).

Serious consequences may exist for children with ADHD who do not receive treatment or receive inadequate treatment. These consequences are numerous and may include low self-esteem, social and academic failure and a possible increase in the risk of later antisocial and criminal behaviour (Picton, 2002:5).

According to McHale, Crouter and Tucker (2001:1775), children who tend to be more academically orientated may not fit in with their larger peer group, resulting in the child feeling lonely or isolated. These children may utilise reading as a free-time activity as it allows them the opportunity to escape from school and social pressures.

3.2.6 Outside influences

During middle childhood, media becomes more important and increasingly accessible to children. They are therefore exposed to a larger number and variety of models of thinking and behaviour providing them with both risk and opportunity (Bronson, 2000:225). Television viewing often becomes the child's most common free-time activity with children watching it when they feel they have nothing better to do (McHale, Crouter & Tucker, 2001:1774).

Families are not always aware of the influences that affect their children as the children become increasingly independent. School-aged children are, however, considered to be accountable for their actions and are expected to know right from wrong in the daily aspects of their lives. Their understanding in middle childhood is also expected to have a moral dimension. During middle childhood children are considered to have a conscience and to feel guilty when they violate standards. They are very interested in fairness and reciprocity during this stage, even though their judgements are a little primitive due to an immature level of cognitive development and a relevant lack of experience (Bronson, 2000:225).

3.3 Emotional development

According to Bronson (2000:227), children in primary school are better able to regulate their emotions and behaviours, than are younger children. This is because they have developed greater cognitive capacities and understand that emotions have to be controlled. Children in middle childhood can reflect and make deliberate decisions about what they should do in certain situations.

Emotional development is visible in middle childhood as there is greater emotional flexibility and emotional differentiation giving rise to the ability to express a variety of emotions. A change has taken place from helplessness, in early childhood, to self-sufficiency and independence. During this period the child's emotions become more sophisticated, more specific and more diverse. The child begins to understand emotional experiences and begins to attribute emotions to internal causes. An awareness develops of social rules which govern the expression of emotions and the child learns to "read" facial expressions with greater accuracy. The child also begins to understand that it is possible for emotional states to be changed psychologically, and realises that people can experience a variety of emotions simultaneously (Louw, Schoeman, Van Ede & Wait, 1998:346).

3.3.1 Attachment

Children who are capable of expressing a need for their caregiver when their coping resources are stretched, and can effectively use their caregiver to reduce their distress are seen as being securely attached. These children have presumably experienced responsive care-giving and have therefore come to perceive their caregiver as helpful and available. Children who are unable to make effective use of their care-giver to calm themselves when they are stressed are considered to be insecurely attached (Finnegan, Hodges & Perry, 1996:1318).

According to Granot and Mayseless (2001:530-538), children who have experienced secure attachment patterns with adults show better social and behavioural competence than do children who exhibit insecure attachment patterns. Secure children also demonstrate better adjustment to the school system and to social, emotional, intellectual and behavioural demands associated with school, than do insecure children. They are also less likely to develop behaviour problems and often show greater effectiveness in cognitive functioning.

Children who view their relationship with their mother as being secure tend to be more accepted by their peers, have more reciprocated friendships and have been observed to be more responsive and less critical with their secure friends.

There are two distinct styles of coping with an insecurity in the attachment relationship. These are the ambivalent and avoidant attachments (Finnegan, Hodges & Perry, 1996:1318). Children who exhibit behaviour patterns which are disorganised and avoidant show the poorest emotional, social and scholastic adjustment, the highest prevalence of peer rejection and of behavioural problems.

According to Granot and Mayseless (2001:539), ambivalent children are more rejected by their peers than secure children, but they tend to perceive themselves as rejected or unwanted by their peers to an even greater degree than the actual peer group rejection. In middle childhood, disorganised and avoidant children experience serious adjustment problems, whereas ambivalent children are mostly problematic within their social relations with their peers. This leads theorists to surmise that avoidant coping is associated with externalising difficulties, and ambivalent coping is associated with internalised difficulties. In comparison to ambivalent children, avoidant children tend to be more aggressive, angry, hostile, non-compliant, non-empathetic and have more difficulty in disengaging from conflict (Finnegan, Hodges & Perry, 1996:1318-1319). The problems ambivalent children experience in their peer relations seem to stem from their tendency to expect rejection. Developmental processes related to socialisation during middle childhood may operate and intervene to affect the quality of attachment of older children and adolescents differently (Granot & Mayseless, 2001:539).

It is important to note that an insecure attachment pattern does not necessarily predict a uniformly maladaptive functioning. There is no significant difference found in cognitive achievement between children with secure or insecure attachments. Although the first relationship sets the stage for the formation of the

child's subsequent emotional relationships, all developmental accomplishments are not necessarily due to the function of secure attachment (Granot & Mayseless, 2001:540).

3.3.2 School

According to Carson and Bittner (2001:290;299-300), there are many demands, expectations and pressures placed on children in school today which makes school a very stressful place. Children experience stressors on a daily basis and perceive and respond to these stressors in highly individualised ways. Common stressors that all school-attending children are exposed to in middle childhood are academic achievement, peer pressure and relationship difficulties. A variety of coping behaviours are therefore necessary to assist children in being able to deal with their stress in a suitable manner. Activity levels are able to influence coping behaviour directly and indirectly through it's relation to problem solving and divergent thinking. Older children have greater impulse control helping them to either cope more effectively with stress or giving the appearance that they are.

Children in middle childhood whose behavioural patterns or styles are perceived by others as being more difficult may be at increased risk for emotional and behavioural disorders, although this should not automatically be assumed according to Carson and Bittner (2001:290-301). The success or failure of the child to adapt to the school environments and the new tasks it brings may have a distinct influence on the child's emotional state, social standing, self-esteem, competence and functioning (Granot & Mayseless, 2001:530).

The researcher is aware that children with ADHD are perceived by others as being more difficult and are at risk for emotional and behavioural disorders. According to Goldstein (2003a), while early intervention will not cure ADHD, it can minimize the long list of secondary problems which children with ADHD generally develop.

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3.3.3 Feelings

As children become older, they become capable of identifying emotional labels such as “anger” and “fear”, and attribute inner feelings to them. The child becomes less fearful during middle childhood about their physical well-being, but because they are attending school and their social boundaries have expanded new fears arise regarding teachers, friends and academic achievements. During this period, the child begins to openly display aggression towards others with the intention of hurting them. This aggression is referred to as hostile aggression and with increasing age becomes less physical and more verbal. A better understanding of other peoples’ feelings and why they feel as they do begins to develop, and the child is more able to control personal emotions and hide feelings (Louw, Schoeman, Van Ede & Wait, 1998:346-347).

3.3.4 Problem behaviour

Behaviour problems stabilise for different children at different levels of development. Aggressive children are frequently not able to initiate varied solutions to problems and are therefore more likely to misperceive other’s intentions towards them as having aggressive intent. This can create problematic interaction (Kowasleski-Jones & Duncan, 1999:932).

Support has been found for three developmental pathways involving severe aggressive patterns during childhood and adolescence according to Loeber, Wung, Keenan, Giroux, Stouthamer-Loeber and Van Kammen (1993:101). The first one involves children who begin by engaging in aggressive acts such as bullying and annoying others, before moving to physical fighting and then to more serious violence in adolescence. The second involves an escalation of covert and concealed problem behaviours, while the third pathway involves conflict with authority figures such as parents and teachers.

The researcher notes that children with ADHD tend to experience a greater level of frustration than others their age due to their inability to cope. This often leads

to aggressive outbursts of frustration as a form of venting their internal anger. Despite previous optimism by researchers and professionals that treating ADHD in childhood would lead to an improved outcome in adulthood, this perception is no longer supported by current research (Goldstein, 2003c).

3.4 Cognitive development

The ages between five and seven are recognised as a time of significant cognitive changes such as the increasing ability to deal with abstract representations of ideas and objects in a systematic way. From the age of five to about seven children gain skills that allow them to reason about increasingly complex problems and situations in both their social and their physical worlds (Kowaleski-Jones & Duncan, 1999:931).

From the ages of ten to twelve years, children develop a greater ability to generalise across discrete instances and to reason by creating and testing hypotheses. They are more able to organize their thoughts and behaviour and they also have an increased ability to monitor their own activities and mental processes during middle childhood (Kowaleski-Jones & Duncan, 1999:931).

The cognitive abilities of children in middle childhood include a growing awareness of the child's own thought processes and the possibility of controlling these thoughts, especially as they become conscious of self-speech and start to think silently in words. Thus, primary school children become more responsible and more consciously aware of their thoughts and actions during this period. (Compare Bronson, 2000: 221; 231; Flavell, Green, Flavell & Grossman, 1997:39.)

3.4.1 The concrete operations period

According to Louw, Schoeman, Van Ede and Wait (1998:316), Piaget (1966) sees middle childhood as being the period of concrete operations. Concrete

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operations involve the manipulations performed on objects, physically, or by observing how they might be moved. (Compare Thomas, 2000:259; Lerner, 1993:183.) This period covers the ages of seven to eleven years. Children during this period have now developed conversation skills, and can do reversible thinking. Although they have some difficulty with abstract reasoning, they are able to appreciate the views of others. They do not need concrete aids for learning during this period. They start moving towards logical thought as they become less egocentric and start differentiating between fantasy and reality. Children during this period start seeing rules as more flexible and develop greater concentration levels, attention spans and capacity for memory (Thompson & Rudolph, 2000:14).

3.4.2 Learning activity

According to Thomas (2000:307), Vygotsky's developmental theory (1977) places middle childhood into the stage of learning activity, which takes place between seven to eleven years. Children begin to develop theoretical approaches to the world and objects within it. This function involves the child needing to consider objective laws of reality and they also begin to understand psychological preconditions necessary for abstract theoretical thought. This type of thought is essential for essential mental operations such as problem-solving.

3.4.3 Self-control

The environment has a major effect on the development of cognitive self-control in middle childhood. Children can be taught strategies which they can voluntarily and consciously use in order to control behaviour and cognitive processes involving memory and problem solving (Bronson, 2000:222).

Children become vulnerable to challenges and judgements in their environment as they develop more awareness of themselves. Their perceived successes and failures and their perceived judgements of others are internalised, and this in turn affects motivation. When children believe they are competent and able to control

aspects of their lives which are important to them, motivation to exercise this control will increase. Once a child believes that they are able to control the outcome of their school tasks, their interest in these activities increases and the child becomes more persistent in pursuing them. When a child believes in their control and competence in any specific area of functioning, they become more motivated to participate in it. As children during middle childhood are just developing internal standards for achievement, they are more vulnerable to external expectations and evaluations (Bronson, 2000:223).

3.4.4 Cognitive development within the school setting

During middle childhood children become more adept at acquiring new information and utilising this information in reasoning and action. This period marks the entrance of children into the formal education setting, ensuring that much of the new information children acquire will be in an academic context (Kowaleski-Jones & Duncan, 1999:931).

Due to the fact that the child spends most of his day in school, his cognitive skills develop a great deal during this period. In school the child is provided with information which increases his knowledge about the world and he learns to read, write and to do mathematics. During middle childhood memory plays an important part in the child's cognitive activities as the child is expected to remember information which he has learnt in school and is expected to utilize it to solve problems (Louw, Schoeman, Van Ede & Wait, 1998:315-316). Their thinking now becomes logical and systematic (Kowaleski-Jones & Duncan, 1999:931). Children in this period of development are much better able to resist distraction than are younger children (Bronson, 2000:231).

From the age of about seven years onwards, there are two distinct but related lines along which children's thinking seems to develop. At this stage children become aware of specific internal organs within their bodies, particularly the larger ones like the heart. They also develop ideas about some materials and the importance of them for the life of the body. These two lines of thought are related

in that the ideas about the main organs are linked with what they do with materials inside the body (Rowlands, 2001:67).

3.4.5 Industry versus inferiority

According to Kowaleski-Jones and Duncan (1999:931) and Schaffer (1993:64), Erikson's developmental theory (1963) places children between the ages of six to twelve years in the stage of industry versus inferiority. In this stage children acquire and master the social and academic skills and tools which they will need for adult life. Children during this period are consumed with the task of becoming producers, learning new skills, and learning what constitutes success in society at large. These skills will be developed at home, school and in the outside world of their peers (Craig, 1996:60). This can often lead children to feel that their family characteristics, gender or race may limit their potential for success, or that their competence may suffer. A potential danger of middle childhood is that children are developing a sense of personal adequacy and are therefore vulnerable. This can lead children to feel that their achievement skills are inadequate which may discourage them from developing these skills further (Kowaleski-Jones & Duncan,1999:931). As children now begin to compare themselves with their peers it is important that they receive praise and encouragement so that they can achieve competence and become productive (Thompson & Rudolph, 2000:16).

The researcher is aware that children with ADHD often feel inadequate as they are unable to master new skills with the ability of others their age. According to Goldstein (2003b), it is important to understand that when children struggle developmentally, emotionally or behaviourally, they are more likely to experience difficulties in a number of important life activities.

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3.5 Physical development

Physical development in middle childhood includes general physical development, which is growth in size and shape, and further development of motor skills, both gross and fine (Louw, Schoeman, Van Ede & Wait, 1998:312). According to Lerner (1993:316), the significance of movement and motor experiences for child growth are crucial to human development and thus recognised in most theories of human development.

3.5.1 General physical development

The general physical development mentioned above has been largely generalized as there are many individual variations. These individual differences can be due to the child's race, sex, nationality and socio-economic level, as well as other factors, both genetic and environmental (Louw, Schoeman, Van Ede & Wait, 1998:314). Young children between the ages of six and seven generally have quite extensive knowledge about their own bodies. Some of this involves what the body is like and how it changes as one grows up. Other knowledge includes understanding 'cause and effect' such as when one does not eat, the body becomes thin (Rowlands, 2001: 66).

The major physical growth occurring in middle childhood is the rapid growth of the child's arms and legs in comparison to his torso. This growth gives the child a lanky appearance. During this period growth is more gradual than during the pre-school period and the later period of adolescence. Both height and mass increase and body proportions change gradually (Louw, Schoeman, Van Ede & Wait, 1998:312).

The brain reaches its adult weight and size, and the weight of the heart increases by five times. The respiratory system begins to function more economically and its elasticity increases causing breathing to become slower and deeper. The

lungs increase by ten times between birth and the end of middle childhood. Deciduous teeth during this period are also replaced by permanent teeth, and this process is usually complete by the end of middle childhood (Louw, Schoeman, Van Ede & Wait, 1998:312).

3.5.2 Motor skills

The learning and refinement of motor skills are the most prominent developmental characteristics during the period of middle childhood. With the neuromuscular system maturing, the child becomes increasingly stronger and gains the ability to perform activities which need more precision. These skills are able to develop due to the child's increase in strength, muscular control and coordination over the body. Increasingly finer motor activities can now be engaged in by the child (Louw, Schoeman, Van Ede & Wait, 1998:314).

By the time the child reaches middle childhood a relatively high level of physical performance should have been attained, especially in the areas which require large muscle control. There is an increase in the speed of movement, and when this is combined with fast reaction time, more complex activities can be executed. During this period a high level of development is gained by the child in both dynamic and static balance. The child's physical movements improve greatly in terms of elegance and balance which enables the child to participate in activities which require motor skills such as running, cycling, jumping, kicking a ball, and doing ballet, as well as a variety of other sports. During this period the child's locomotor skills which he acquired earlier gain more mature patterns, especially in activities which require rhythmical responses (Louw, Schoeman, Van Ede & Wait, 1998:314).

According to Louw, Schoeman, Van Ede and Wait (1998:314), boys usually develop motor skills more quickly than girls as they have more muscle tissue and are therefore stronger. Louw, Schoeman, Van Ede and Wait (1998:315) also state that according to Turner and Helms (1987), this is a generalization and other influences which exist in society are the allocation of sex roles, sexism and

social and cultural values. They add that boys are stronger, but only until girls of the same age reach pre-adolescence at which time they can out do boys in activities which require muscle strength.

3.6 Self-concept: one's subjective understanding of self

Self-concept begins to develop in early childhood as a child becomes self-sufficient in tasks such as feeding, dressing and bathing. The child begins to understand himself to a greater degree as his thinking becomes more sophisticated and he gains more life experience (Botha, Van Ede & Piek, 1998:232).

Children experience a period of particular vulnerability in their primary school years as they become more aware of themselves, of external standards and of the differences between themselves and others. They become motivated to participate in activities which they believe they are good at and become less motivated to involve themselves in activities which they believe they cannot do adequately. They tend to judge their ability in relation to others and in relation to the standards of performance which they have internalised. Children who feel helpless or incompetent tend to avoid challenges and become less persistent, often developing reduced self-esteem as a result (Bronson, 2000:235).

Children who have positive relationships with friends will see themselves as worthwhile and competent because a child with a supportive, close friendship will feel valued as an individual. It is important to note that both friendship quality and family support are associated with a child's development of self-esteem (Franco & Levitt, 1998:320).

3.7 Conclusion

The period of middle childhood should be an exciting one for the child. The development taking place during this period allows the child to achieve well in

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new skills, to become popular amongst friends, and to develop a positive self-concept (Louw, Schoeman, Van Ede & Wait, 1998:315). This shows that these middle childhood years are indeed a critical period for physical, cognitive, social, emotional, cognitive, and self-concept development.

This is a period when children become aware of themselves and others around them. They become vulnerable to how they perceive others as seeing them. It is during this stage of development too that they begin to learn to identify what tasks they excel in and what tasks they find more difficult to achieve in. Thus their self-concept begins to develop. If a child feels that they are unable to achieve competence in any activity, such as is experienced by children with ADHD, this leads to the development of a poor self-concept which reduces the child's motivation to strive for competence. With a lack of motivation to achieve due to the child’s lack of confidence in him/herself, the child’s negative self-concept is enhanced.

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CHAPTER FOUR: EMPIRICAL STUDY

4.1 Introduction

The researcher is of the opinion that the previous chapters have established a theoretical framework for the empirical study, based on literature and consultations with experts. In this chapter the researcher will discuss the arrangements for and the execution of the empirical study, the aim of which is to explore the frustration expressed by children diagnosed with ADHD within the classroom setting. Also included in this chapter will be the assessment of the results of the empirical study represented as quantitative data.

4.2 Exploratory research

The researcher conducted an explorative study. The purpose of an exploratory study according to Bless and Higson-Smith (1995:42) is to gain insight into a person, community, situation or phenomenon. A research question was utilized. Quantitative research makes use of relatively specific questions or hypotheses which remain constant throughout the investigation (Fouché & Delport, 2002:80).

4.3 The purposive sample

The researcher utilised purposive sampling which is classified as non-probability sampling. Purposive sampling is based entirely on the researcher's judgement and is sometimes referred to as judgmental sampling. This type of sampling can only be utilised based on the researcher having sufficient knowledge related to the research problem allowing a selection of 'typical persons' for inclusion in the sample. The researcher composed a sample of elements containing the most characteristic, representative or typical attributes of the population. (Compare Babbie & Mouton, 2001:166; Strydom & Venter, 2002:207.) For the purpose of this study, the researcher composed a sample of 20 children:

- in middle childhood (between the ages of 6 and 12 years);
- who have been professionally diagnosed with ADHD;
- who are currently attending Arthur Matthews Primary School or Montrose Primary School;
- whose parents were willing to sign consent for their child to be observed;
- whose teachers were prepared to have the researcher observing in their classrooms.

The researcher had to rely on the teachers at both schools to assist in the selection of the purposive sample. Teachers that consented for their classes to be involved in the study had to identify the children in their classes who had been professionally diagnosed with ADHD.

4.3.1 Arthur Matthews Primary School

Mrs Brink, headmistress, arranged for the researcher to meet with the teachers on Friday 10th October 2003 in order to discuss with them the process of the empirical study. The research was explained to them. Teachers that felt comfortable with having the researcher present within their classrooms, while they are teaching were asked to please identify children in their classes who had been professionally diagnosed with ADHD, so that the researcher could gain a better concept of the number of children.

4.3.2 Montrose Primary School

The research was discussed with the remedial teacher, Mrs Gordon. She discussed it with Mr Zeelie the headmaster who issued the researcher with a letter of permission for the research to be carried out at his school. Mrs Gordon obtained permission from teachers with children diagnosed with ADHD in their classrooms for the researcher to be present and to observe. She explained to the teachers the purpose of the study.

4.3.3 Parental consent

Copies of the parental consent form (see appendix 5) were given to each teacher who had children diagnosed with ADHD in their classes and who were willing for the researcher to sit in during their classes to observe the identified children. It was requested that each child identified in their classroom as having ADHD be given a copy of the parental consent form to take home with them to their parents, together with an attached letter (see appendix 6) containing the option for parents of not allowing their children to partake in the study. The letter also contained a contact number for the researcher, inviting parents to phone if they feel it necessary to clarify any aspects or raise any concerns.

4.4 Pilot study

The pilot study was conducted at Little Miracles nursery school with children aged six years, who were not partaking in the empirical study. It was noticed during this study that three of the questions on the checklist were not applicable to the expression of frustration, but were rather just questions relating to direct symptoms of ADHD. There were also important questions missing, relating to childrens' expressions of frustration directed towards themselves. After this study, the checklist was adjusted accordingly so that it could be used for the empirical study.

4.5 The checklist or measuring instrument

In studying the literature, the researcher was able to identify a number of key aspects that were felt to be of relevance with regards to the expression of frustration by a child having been diagnosed with ADHD within the classroom setting. These key aspects include: how the teacher reacts towards the child; how classmates react towards the child; how the child reacts towards him/herself; how the child reacts towards his/her classmates; how the child reacts towards his/her teacher and how the child indirectly externalises his/her frustration.

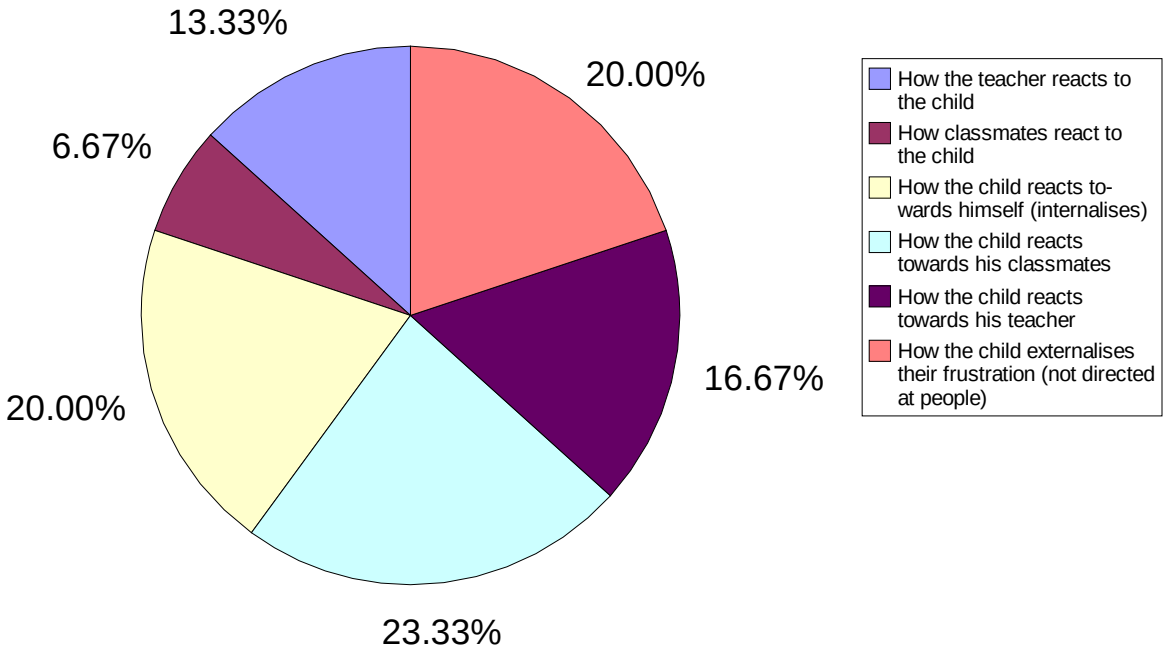

Figure 1: Six key aspects of the checklist

These key aspects were used to create the checklist which comprises of thirty questions. Figure 1 shows in percentages how many questions in the checklist fell into each category. In other words, 13.33% of the questions in the checklist relate to how the teacher reacts towards the child; 20% of the questions relate to how the child externalises his/her frustration indirectly; 16.67% of the questions relate to how the child reacts towards his/her teacher; 23.33% of the questions relate to how the child reacts towards his classmates; 20% of the questions relate to how the child reacts towards him/herself and 6.67% of the questions relate to how the child's classmates react towards him/her.

This pie chart clearly indicates the six key aspects which were utilised in comprising the checklist, as mentioned above.

The checklist was constructed utilizing thirty questions with the purpose of being able to quantitatively measure the above-mentioned aspects. The researcher will briefly discuss these aspects.

4.5.1 How the teacher reacts towards the child

Often the child with ADHD receives negative comments and punishment within the classroom, due to his/her behaviour (Picton, 2002:4,17 & 20). The teacher often berates the child for their lack of attention in class, talking out of turn, and fidgeting which distracts other children in the class (Reis, 2000:175). Teachers of children with ADHD also experience significantly greater levels of stress in working with these children (Greene, Beszterczey, Katzenstein & Park, 2002:5).

4.5.2 How classmates react towards the child

Within the social setting, the child with ADHD is often teased by his/her classmates because he/she is not like them and does not fit in. The child is also often teased as he/she cannot cope with his/her work at school due to a lack of concentration. The child is often disliked and ridiculed causing him/her to become angry and aggressive thus affecting his/her ability to make friends (Picton, 2002:17,20).

4.5.3 How the child reacts towards him/herself

According to Reis (2000:175), a learner's self-esteem or self-worth is improved when a teacher is able to create a classroom environment in which the child with ADHD is able to feel that their efforts are recognised. ADHD is signified by pent-up frustration, difficulties in socializing and learning problems (Sheppard, 1998:45). This pent-up frustration can be internalised causing the child to physically hurt themselves as observed by the researcher, or to develop a low self-esteem and therefore never reach their full potential (Schwiebert, Sealander & Dennison, 2002:3).

4.5.4 How the child reacts towards his/her classmates

The frustrated child tends to become aggressive in play, thus isolating himself/herself from other children who choose not to play with him/her (Picton,

2002:17). Some children with ADHD are more aggressive than their classmates and are therefore unpopular and get into greater trouble, while others are shy, socially withdrawn, not popular and not good at sports. Many children with ADHD have a low self-esteem, unpredictable mood swings and get angry or lose their temper easily (Thompson & Rudolph, 2000:492).

4.5.5 How the child reacts towards his/her teacher

Often children with ADHD feel that nobody understands them and therefore can be defiant towards their teacher in class (Picton, 2002:17,20). The child with ADHD is often very attention seeking, wanting the teacher's attention constantly. If the child does not get the attention that they need, it can often lead to frustration and aggression towards their classmates (Main, 2003). Ramer and Gordon (2002:26) state that children with ADHD are more likely to use inappropriate verbal and body language to vehemently express how they are feeling.

4.5.6 How the child indirectly externalises his/her frustration

The child who is frustrated often expresses this frustration through spontaneous reaction as observed by the researcher. This is represented by the way a child will suddenly throw and object across the classroom, for instance. The result of this reaction may injure someone purely accidentally. The child basically reacts to the inner build-up of frustration and indirectly externalises it at a point where he/she seeks to find release (Thompson & Rudolph, 2000:492).

4.6 Data presentation

According to Kerlinger (in De Vos, Fouché & Venter, 2002:223), data analysis entails that data is broken down into constituent parts in order to obtain answers to research questions. The analysis of research data also involves interpretation if the research question is to be answered fully. De Vos, Fouché and Venter

(2002:223) also state that if the units of analysis are relatively small, statistical analyses can be performed manually. For the purpose of this study, the researcher feels that manual analysis of the data will be the most effective technique. The analysed data will be graphically presented by the researcher utilising pie charts and histograms. This will also assist the researcher in interpreting the analysed data.

Figure 2, below, represents each of the 30 questions appearing in the checklist, and the percentage of positive answers indicating the expression of frustration have been clearly indicated in the form of percentages.

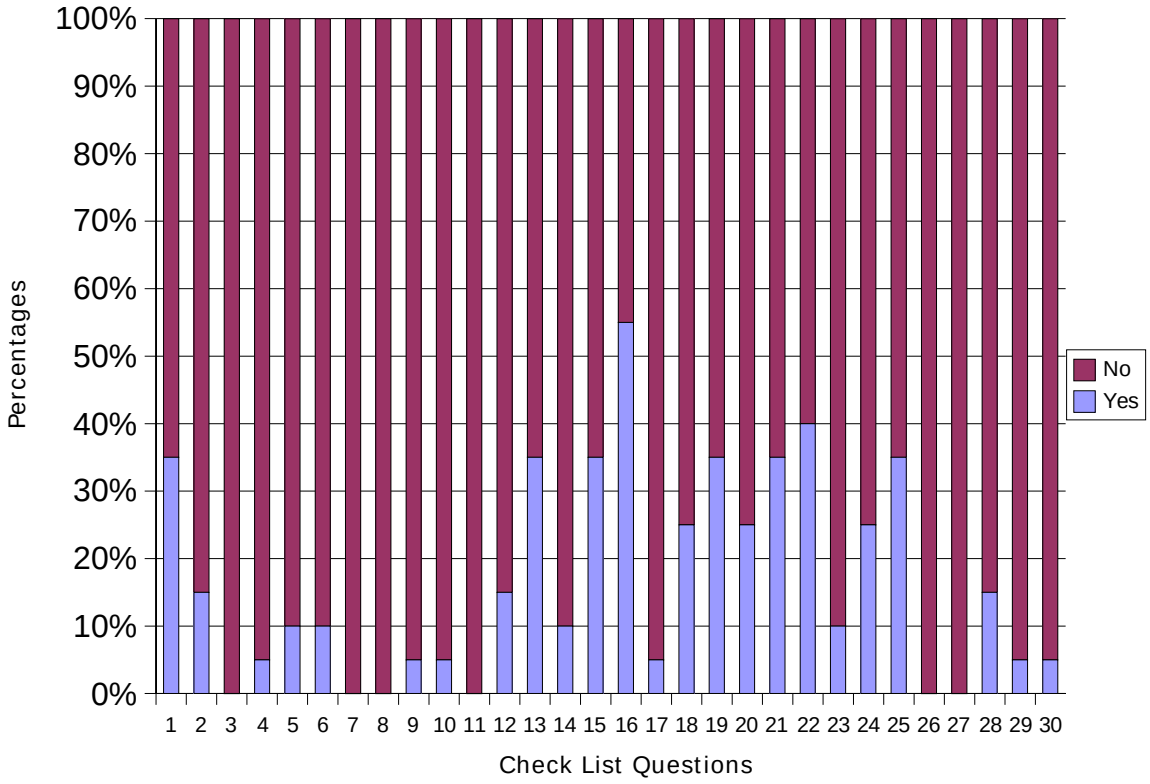

Figure 2: Questions and Answers

During classroom observations of 20 children, none of them displayed such behaviour as described in question 3; 7; 8; 11; 26 or 27. These unobserved behaviours fall into three of the six categories previously discussed. Question 3

(how the child reacts towards his/her classmates); questions 7; 8 and 11 (how the child reacts towards his/her teacher) and questions 26 and 27 (how the teacher reacts towards the child). It is therefore interesting to note that every child expressed their frustration at least once in the form of self-directed or externalised behaviour. The highest scores in figure 2 actually represent either self-directed or externalised behaviour. Note specifically questions 16, does the child constantly fidget (externalised behaviour) and 22, does the child appear unsure of self (self-directed behaviour). The researcher feels that it is important to note that this research shows that frustration within the classroom setting was expressed.

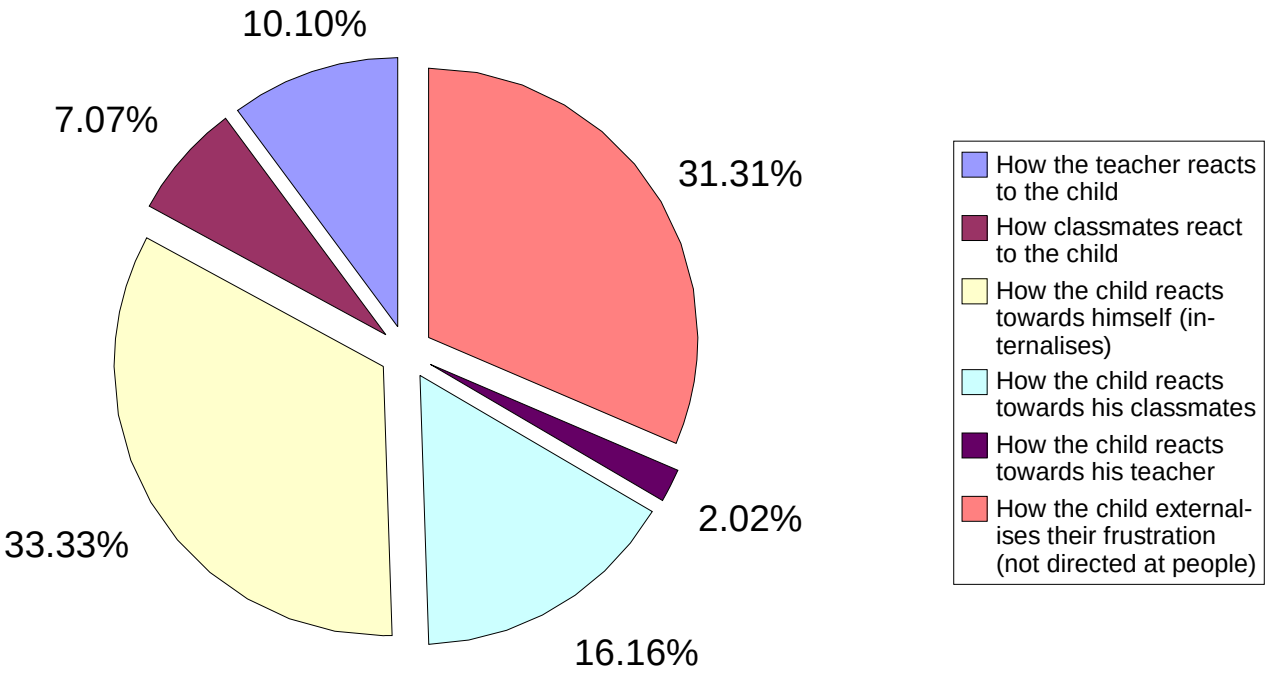

Figure 3: Normalised statistics based on observation rate

This pie chart clearly indicated the six aspects in the checklist. Self-directed behaviour was most often observed with an average of 33.33%. The category with the least number of questions in the checklist is: how the child reacts

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towards his/her teacher. Negative behaviour towards the teacher was least often observed, with an observation rate of only 2.02%. The researcher feels that this could be linked to the fact that the children observed for this research were between the ages of 6 and 12 years, and therefore not yet as defiant as a teenager might be.

4.7 Answering the research question

The researcher completed a checklist on each child from the sample of those professionally diagnosed with ADHD from Arthur Matthews Primary School and Montrose Primary School. The checklist was completed while observing these respondents in their own classroom setting in order to gain objective information on how they express their frustration.

The six aspects previously mentioned: how the teacher reacts towards the child (questions 25-28); how classmates react towards the child (questions 23, 24); how the child reacts towards him/herself (questions 13, 18, 20-22, 30); how the child reacts towards his/her classmates (questions 1-4, 6, 10, 14); how the child reacts towards his/her teacher (questions 7-9, 11, 29) and how the child indirectly externalises his/her frustration (5, 12, 15, 16, 17, 19) have now been compared (see figure 3). This assisted the researcher in answering the research question.

The research question for this study was the following: *How is frustration expressed by the child with ADHD in middle childhood within the classroom setting?*

It must be remembered that each child in the sample group has been professionally diagnosed with ADHD. The goal of this study was to explore the expression of frustration in the child with ADHD in middle childhood within the classroom setting. The checklist was used as a measuring instrument to assess the problem of frustration and how it is expressed by children in middle childhood.

By looking at the data that has been gathered by means of the checklists and by analysing each of the key aspects, the researcher was able to answer the research question by answering the following questions:

4.7.1 Do children with ADHD experience frustration?

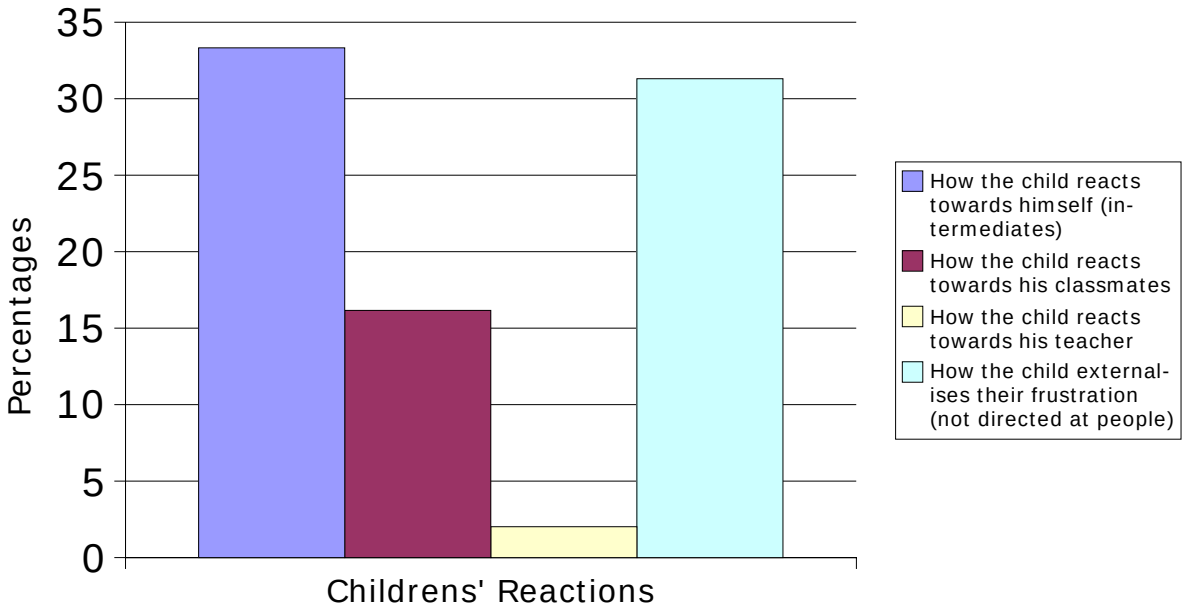

Figure 4: Frustration experienced by children with ADHD.

Figure 4 indicates in a histogram the variety of ways that children with ADHD express their frustration within the classroom setting, in this study. The statistics are normalised based on the number of questions under each category on the checklist. The majority of children observed directed their frustrations first towards themselves through hitting or kicking themselves, isolating themselves from other children and appearing unsure of themselves, with an average of 33.33%. They then expressed their frustrations through indirect, externalised behaviours such as throwing objects around the classroom, humming, fidgeting, hitting and breaking objects in class with an average of 31.31% and then towards their classmates with an average of 16.16% Frustration expressed by the children was least observed through negative reactions towards their class

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teacher with an average of 2.02%. (Compare Loeber, 1990:39; Ramer & Gordon, 2002:26; Loeber, Wung, Keenan, Giroux, Stouthamer-Loeber and Van Kammen, 1993:101.)

Figure 4 confirms the fact that the respondents do experience frustration.

4.7.2 Do children with ADHD need to express their frustration?

The researcher is of the opinion that the answer to this question is 'yes.' The researcher notes that if children with ADHD are not able to express their frustration, they tend to become aggressive towards their classmates or towards themselves (Loeber, 1990:39). This can lead to a negative response towards them from their teacher and classmates. According to Picton (2002:17), many teachers do not perceive children with ADHD in a positive light. Teachers of children with ADHD also experience significantly greater levels of stress (Greene, Beszterczey, Katzenstein & Park, 2002:5).

Children who are not able to express their frustration will internalise it (see figure 4). According to Picton (2002:4), children that often get into trouble for disrupting the class, or not following instructions, often become frustrated as they find concentration impossible. This in turn can lead to a child developing very poor self-esteem and self-loathing as ADHD is signified by pent-up frustration, difficulties in socializing and learning problems (Sheppard, 1998:45). Early assistance in helping the child to express their frustration is crucial in order to prevent academic underachievement and negative effects on the lives of children affected by ADHD (Schwiebert, Sealander & Dennison, 2002:3).

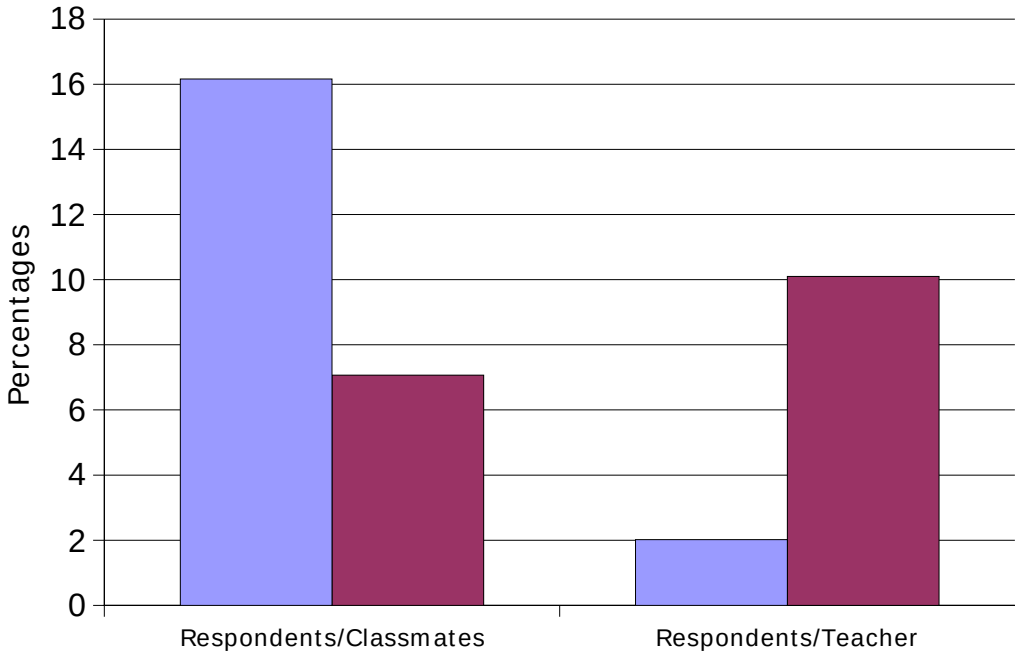

Figure 5: Retaliatory Aggression

This histogram draws a comparison between how the child reacts to his/her classmates and how they in turn react towards the child. It also includes the comparison between how the child reacts towards his/her class teacher and how the teacher reacts towards the child.

The children with ADHD who were observed (represented in blue on the graph), reacted negatively towards their classmates on an average of 16.16% of the time, whereas their classmates (represented in maroon on the graph) only responded negatively towards them on an average of 7.07%. Classmates of the child with ADHD only react negatively towards the child half as regularly as the child with ADHD reacts towards them.

The researcher's observation was that classmates regularly ignore the 'irritations' of the child with ADHD while they attempt to get on with their schoolwork. They only seem to react towards the child with ADHD if they are disturbed to the degree that they are prevented from functioning. They thus retaliate through their

own frustration. Children with ADHD tend to perceive themselves as rejected or unwanted by their peers to an even greater degree than the actual peer group rejection (Granot & Mayseless, 2001:539).

As is visible in this histogram, the child (represented in blue) barely displays negative behaviour directed specifically towards the teacher with a total of 2.02%. It is interesting to note though that the child's teacher (represented in maroon) reacts negatively, more often, directly towards the child with an average of 10.10% of the time. This could be due to the fact that teachers of children with ADHD in their classes experience significantly greater levels of stress when working with these children (Greene, Beszterczey, Katzenstein & Park, 2002:5).

4.7.3 Do children express their frustration externally within the classroom setting?

The researcher is of the opinion that the answer to this question is 'yes.' This is visible in figure 6 where we see statistically how children with ADHD in the class regularly hit other children with their hands, throw objects around the classroom, break objects in class and tease their classmates.

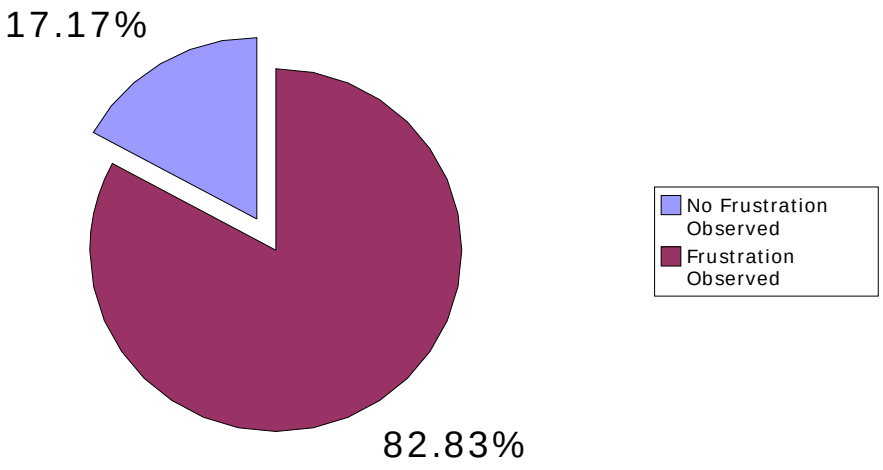

Figure 6: External expression of frustration

This pie chart clearly indicates the amount of aggression both expressed and experienced by children with ADHD within the classroom setting. Statistically we are able to see that children with ADHD tend to experience more frustration within the classroom setting than not. Frustration was experienced on an average of 82.83% as opposed to no frustration being observed 17.17% as observed within the classroom setting. Note that 82.83% of the pie chart is comprised of the different ways in which children with ADHD were observed within their classrooms to express frustration. Some of the ways this frustration was expressed was through hitting and pushing other children, hitting and kicking themselves, isolating themselves, throwing and breaking objects in class and threatening other children. (Compare American Academy of Pediatrics, 1996; Description and Symptoms, 2003.)

4.7.4 Do children internalise their frustration within the classroom setting?

Figure 4 shows how children with ADHD internalise their frustration through hitting/kicking themselves, as well as isolating themselves from their classmates, frowning and appearing very unsure of themselves in class.

The researcher believes that it is vital to understand exactly how a child expresses his/her frustration. Frustration that is not released builds up within the child until it is expressed through aggression (Loeber, 1990:39). Chronic and serious aggressive behaviour is commonly associated with ADHD (Turgay, Morgan & Ansari, 2002:4). Children with ADHD are more likely to use inappropriate verbal and body language to vehemently express how they are feeling (Ramer & Gordon, 2002:26). The act of aggression always results in increased negative attention being given to the child, which increases their levels of frustration (Picton, 2002:17). In this way, the frustration never really finds a release.

4.7.5 How is frustration expressed by the child with ADHD in middle childhood within the classroom setting?

As can be seen in figures 3 and 4, frustration within the classroom setting is experienced by children with ADHD in middle childhood. Depending on the child's personality, some children express this frustration externally as frustration or as aggression, while other children internalise this frustration and target it towards themselves.

By utilizing the checklist within the classroom setting, it was possible to establish that frustration is expressed by children diagnosed with ADHD in middle childhood (see figure 2). The goal of this study was achieved as the researcher was able to establish the ways in which children with ADHD express their frustration within the classroom setting, and so the research question was answered (see figure 7).

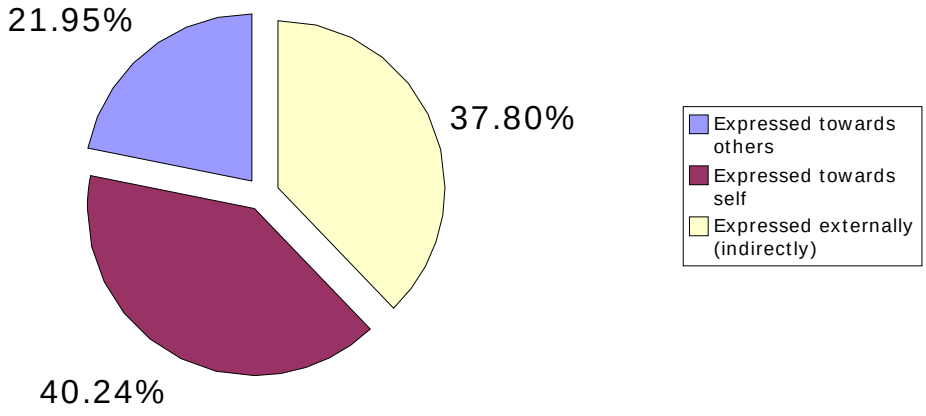

Figure 7: The expression of frustration within the classroom setting

This pie chart signifies a more detailed representation of the expression of frustration by children with ADHD as observed by the researcher within the

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classroom setting. It comprises the total percentage of observed behaviour in each aspect of the expression of frustration. These three aspects are the expression of frustration towards others; the expression of frustration towards self and the indirect, external expression of frustration.

It must be concluded that children with ADHD certainly do experience frustration. The researcher feels that the frustration experienced by children with ADHD is significant in that it is so regularly self-directed or expressed as aggression. Aggression is a result of suppressed frustration. Chronic and serious aggressive behaviour is commonly associated with ADHD (Turgay, Morgan & Ansari, 2002:4).

4.8 Summary

Frustration is experienced by children with ADHD within the classroom setting, with self-directed behaviour being most often observed. Children who are unable to express their frustration will internalise it. This can lead to a child developing poor self-esteem, difficulties in socialising and learning problems. (Compare Sheppard, 1998:45; Schwiebert, Sealander & Dennison, 2002:3.) Frustration that is not released builds up within the child until it is expressed through aggression (Loeber, 1990:39). Children with ADHD are more likely to use inappropriate verbal and body language (Ramer & Gordon, 2002:26). Children therefore need to be taught coping mechanisms which assist them in dealing with their frustration instead of suppressing it.

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CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of this chapter is to provide closure to the research process through summarising the research material, drawing conclusions from it and making recommendations. With the summary and conclusions of this study, the researcher will be able to determine whether or not this study has been successful and what has been achieved through it. The conclusions and recommendations of this study will now be presented in accordance with the goal, objectives and research question of the study.

5.2 The goal of this study

The goal of the study was to explore the expression of frustration in the child with ADHD in middle childhood within the classroom setting.

The goal of this study was formulated by the researcher in chapter one. The motivation for this study was also discussed in chapter 1 where a description was included on what procedures would be utilised in order to answer this research question. The researcher thus feels it is necessary to summarise chapter 1 under this heading.

5.2.1 Summary

Frustration inhibits a child's ability to be able to function effectively both within an educational, and a social setting. A lack of knowledge exists between the relationship of frustration and ADHD even though it affects the daily functioning of many children. Early intervention is critical in order to prevent academic underachievement in children affected by ADHD (Schwiebert, Sealander & Dennison, 2002:3). The researcher is of the opinion that if children with ADHD are not taught effective coping mechanisms to deal with their frustration, this

frustration will result in aggressive behaviour being displayed by the child.

Children with ADHD often become isolated in class, feeling that no-one really understands them (Picton, 2002:17,20). This isolation will further enhance the frustration experienced by the child. The researcher therefore sees the necessity of gaining an understanding of the frustration experienced by the child with ADHD through the monitoring of his/her frustrated/aggressive behaviour within the classroom setting.

The researcher utilised a quantitative research approach for data gathering and analysis, and an exploratory research design. This research design enabled the researcher to explore the extent to which children diagnosed with ADHD express their frustration within the classroom setting. The respondents formed part of a non-probability, purposive sample.

5.2.2 Conclusions

Conclusions drawn from the introduction to this study:

- Frustration inhibits the child's ability to function effectively.
- Teachers generally do not perceive children with ADHD in a positive light.
- Children with ADHD are often perceived as just being 'difficult' children.
- A child's frustration is often not recognised within a classroom setting.
- The frustrated child often expresses him/herself through aggression in class.

5.2.3 Recommendations

These recommendations are based on the conclusions mentioned above:

- It is necessary for parents and teachers to be made aware of the frustration that children with ADHD experience so that they can gain a deeper understanding into the behaviour of these children.
- Parents and teachers could learn to assist children in coping effectively with their frustration.

- This study was mainly conducted with the purpose of exploring the ways in which children with ADHD express their frustration. The possibility exists for this study to be utilised as a basis for a further in-depth study.

5.3 The objectives of this study

Objective 1: to obtain a theoretical frame of reference regarding ADHD, frustration and the development of a child during middle childhood.

The first objective of this study was based on a literature study completed in chapters two and three. Chapter two looked specifically at defining ADHD as well as how it is diagnosed and treated in children. It also focused on the link between aggression, the external expression of frustration, and ADHD in middle childhood. Chapter three was a study on middle childhood, being the critical period for a child's social, emotional, cognitive and self-concept development. Middle childhood is defined as the period of a child's life between six and twelve years. The conclusions and recommendations of these two chapters will now be discussed.

5.3.1 Conclusions

It is important with children who have been diagnosed with ADHD to focus on their positive aspects and their competencies, instead of the constant focus on their negative characteristics. It has been noted in previous research that when teachers respond positively to the efforts of learners with ADHD, the learners put more effort into their work and the frequency of their negative behaviours decrease (Reis, 2000:176).

As discussed in chapter three, the ongoing self-directed behaviour of children is guided by their expectations about the social and physical environment and their own capabilities within it. The child with ADHD who feels isolated and incapable

of adjusting to their social or physical environment becomes frustrated and often expresses this through negative self-directed behaviour (Bronson, 2000:224).

5.3.2 Recommendations

- A child who is assisted in dealing appropriately with his/her frustration should show a marked improvement in his/her ability to concentrate within the classroom setting.
- Less frustration experienced by the child will reduce the child's need for the defence mechanism of aggression.
- Children can be taught strategies which they can voluntarily and consciously use in order to control behaviour and cognitive processes involving memory and problem solving.

Objective 2: to conduct a quantitative empirical study to observe the frustration expressed by children diagnosed with ADHD within the classroom setting.

The second objective of this study was researched through the researcher observing children with ADHD within their classroom setting, utilizing a checklist.

5.3.3 Conclusions

Frustration was expressed by children within the classroom setting in three main ways. It was directed towards others; directed towards self, or indirectly, externally expressed without being directed towards a target. The researcher feels that it is important to note that this research shows that frustration within the classroom setting was mostly internalised.

Children in the same class as a child diagnosed with ADHD seem to ridicule this child to a much lesser degree to what the researcher first expected. Classmates will endure a number of 'irritations' before actually responding negatively towards the child with ADHD. Some of the children with ADHD are actually quite enjoyed by classmates. They are often entertaining in their relationship with the teacher

as they do not always think through the consequences of what they say, or how they talk to the teacher.

The researcher noted that children within the classroom are much slower to react negatively towards the child with ADHD than are the teachers. Teachers seem to become irritated with the child considerably more quickly. It is important to take into account though that teachers are responsible for between 30 and 50 children in their class. The misbehaviour of one child therefore ensures a much quicker negative response, particularly if that one child has been diagnosed with ADHD and therefore is seen as misbehaving repeatedly in class. Teachers of children with ADHD experience significantly greater levels of stress in working with these children (Greene, Beszterczey, Katzenstein & Park, 2002:5). Frustration expressed by the child with ADHD was least observed through negative reactions towards their class teacher.

5.3.4 Recommendations

Although this research explored the expression of frustration in children with ADHD, it only explored the negative expression within a classroom setting. Further research could be carried out on more appropriate expressions of frustration outside of the classroom such as during sport, exercise, and other physical activity.

The researcher feels that this study has the potential to form the basis for a further in-depth study based on assisting children in expressing their frustration in appropriate ways. Children who have the opportunity of expressing their frustration appropriately, even outside of the classroom setting, may well be able to concentrate better in class and their levels of aggression should reduce, causing aggressive incidents to become less frequent.

It is crucial that children are given outlets for expressing their frustration in a way that is safe and socially acceptable. Further research could look at coping

mechanisms for children which might assist them in this area – particularly for within the classroom setting.

Frustration seems to be very self-directed during middle childhood. Further research could be conducted with children older than twelve years in order to see whether the frustration tends to become more aggressive in the way it is expressed, and whether this aggression is displayed outwardly towards others, or whether it remains mostly self-directed.

The researcher is of the opinion that children need to be encouraged to talk about how they are feeling, for two reasons:

- If they can express how they are feeling then they can be helped.
- If they understand what they are feeling they will be able to make sense of their emotions.

Objective 3: to make conclusions and recommendations for the benefit of social workers, parents and teachers from both the literature and empirical studies on the expression of frustration by the child with ADHD in middle childhood within the classroom setting.

The last objective of this study has been achieved through the conclusions and recommendations of both the literature and empirical studies as discussed above. The empirical study was built onto the knowledge foundations on ADHD, aggression and middle childhood, gained from the literature study.

The empirical study enabled the researcher to answer the research question. Answering the research question was the goal that the researcher set out to achieve, through completing each of the three objectives discussed above. The researcher was thus able to explore the variety of ways in which children diagnosed with ADHD express their frustration within the classroom setting.

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5.4 The research question

How is frustration expressed by the child with ADHD in middle childhood within the classroom setting?

By utilising the quantitative research design the researcher was able to answer the research question. The exploratory design was used as the purpose of the research was exploratory. The goal of the research was to explore the expression of frustration amongst children diagnosed with ADHD during middle childhood, within their classroom setting. Chapter four graphically represents the expression of frustration as observed by the researcher within the classroom setting.

5.5 Concluding statement

From this study, it is very clear that frustration plays a large role in the school life of a child diagnosed with ADHD. This study also shows that the child with ADHD directs much of his/her frustration towards him/herself. This raises concern as to the child's inability to cope and therefore the damage it causes to the child's self-esteem.

In order to assist a child in dealing with his/her frustration, the child needs to be taught coping mechanisms. Frustration that is not dealt with in its early stage will develop into aggression as was indicated by research findings.

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APPENDIX 1

RESEARCH CHECKLIST

In the classroom, did the child:

	Y	N
1. Hit another child with his/her hands		
2. Push another child		
3. Kick another child		
4. Hit another child with an object		
5. Throw objects around the classroom		
6. Throw objects at other children		
7. Throw objects at the teacher		
8. Swear at the teacher		
9. Walk out of the classroom		
10. Threaten other children verbally		
11. Threaten the teacher verbally		
12. Lose his/her temper		
13. Become angry without being aggressive		
14. Take other children's belongings		
15. Hum or make noises in class		
16. Constantly fidget		
17. Break any objects in the class		

18. Isolate himself/herself from other children	|	|
19. Hit an object with frustration	|	|
20. Hit/kick himself/herself	|	|
21. Frown in class	|	|
22. Appear unsure of self	|	|

In the classroom, was the child:

	Y	**N**
23. Teased by classmates	|	|
24. Shouted at by classmates	|	|
25. Shouted at by the teacher	|	|
26. Sent out of the classroom as punishment	|	|
27. Made to stand in the corner	|	|
28. Placed at a separate desk away from other children	|	|
29. Defiant towards the teacher	|	|
30. Tearful in class	|	|

APPENDIX 5

Participant's Name: _____ Date: _____

Principal investigator: Claire de Jager, University of Pretoria, Lynwood Road, Pretoria

Informed Consent

1. *Title of Study:* The expression of frustration by the child with ADHD in middle childhood within the classroom setting: a social work study.
2. *Purpose of the Study:* The purpose of this study is to observe the expression of frustration, within the classroom setting, by children diagnosed with ADHD.
3. *Procedures:* The researcher will observe the behaviour of my/our child and complete a checklist which will be quantitative, and therefore not allow for subjective opinions. This checklist will be completed on my/our child based on his/her behaviour within the classroom.
4. *Risks and discomforts:* There are no known discomforts associated with this study as my/our child will be observed within a classroom setting and therefore will only be indirectly involved. My/our child will be observed within his/her normal school class.
5. *Benefits:* I/we understand there are no direct benefits for my/our child participating in this study. However, the results of the study may help researchers gain a better understanding of the frustration experienced by children with ADHD for future research and programme development.
6. *Participant's Rights:* I/we may withdraw my/our child from this study at any time.
7. *Financial Compensation:* There will be no travel expenses as my/our child will be observed during a normal school day.
8. *Confidentiality:* The checklist completed by the researcher will not have my/our child's name written anywhere on it, thus ensuring confidentiality. The checklist will be kept by the principal investigator until the data has been successfully gathered, at which point it will be destroyed.

   I/We_____

   understand that the checklist will be confidential. The results of this study will be published in a mini-dissertation and an article will be written for a scientific journal.
9. If I/we have any questions or concerns, I/we can contact Claire at (011) 784-6214 during the week between 8:30am and 4:30pm.

   I/We understand my/our rights as the parent/s of _____and I/we voluntarily consent to his/her indirect involvement in this study. I/we understand what the study is about and how and why it is being done.

_____

Parent/s or Guardian/s Signature Date

_____

Signature of Investigator

APPENDIX 6

Dear

Re: _____

My name is Claire de Jager. I am currently studying my Master's degree at the University of Pretoria, and am looking at conducting my research at Arthur Matthews Primary School. The Department of Education, as well as Mrs Brink, have given me permission to conduct this research at Arthur Matthews, but only if parent's grant permission for their child to be involved. Attached is a copy of a parental consent form which also gives more detailed information about what my research involves.

If you are in agreement for your child to be a part of this study, please could you complete the parental consent form and return it to the school by Wednesday 22nd October. If you feel you have questions which you would like to ask me, please feel free to contact me during the day on (011) 784-6214.

If you do not want your child to be involved in this study, please complete the slip below and return it to the school also before the 22nd October.

If I have not received either a completed slip, or parental consent form by 22nd October, I will ring you just to clarify your position with regards to your child's involvement in this study.

Thank-you so much for your assistance.

Claire de Jager

I DO NOT give permission for my child to be involved in this study.

Name of child: _____

Signature of Parent/Guardian: _____ **Date:** _____