# The impact of a board game as parent guidance strategy to reinforce Cognitive Control Therapy in the home environment

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## 2007

# The impact of a board game as parent guidance strategy to reinforce Cognitive Control Therapy in the home environment

**by**

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… it's like trying to build a house of cards in a dust storm.

You have to build a structure to protect yourself from the wind

before you can even start on the cards

(Hallowell 1992:1).


Dedicated to Henry,
my structure when I have to build in a storm!!!

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I, Hestie Sophia Byles (student number 20021781), hereby declare that all the resources that were consulted are included in my reference list and that this study titled: **The impact of a board game as parent guidance strategy to reinforce Cognitive Control Therapy in the home environment,** is my original work.

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HS Byles

April 2007

THE IMPACT OF A BOARD GAME AS PARENT GUIDANCE STRATEGY TO REINFORCE
COGNITIVE CONTROL THERAPY IN THE HOME ENVIRONMENT

by

Hestie Sophia Byles

| | | |
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In this study the impact of a board game as parent guidance strategy to reinforce Cognitive Control Therapy (CCT) in the home environment of a child with ADHD was explored. The influence of such a board game, based on the principles of CCT, on multiple contexts of the child's existence - therapeutic and family contexts - was also investigated. There were two reasons for involving the parents in therapy. Firstly, children with an attention problem are situated within contexts and the effect of ADHD can permeate to the home and school environments. Secondly, for Cognitive Control Therapy (CCT) to be successful, it needs to be sustained by frequent repetition. It was hypothesized that sustainability of the effect of CCT should rise substantially after introduction of the board game, as the child and the parent can reinforce the principles of CCT by using it, even without being able to attend a session. The board game was designed by using the principles for game development as articulated by Dodge.

A case study was then conducted by using a mixed methods approach, where quantitative and qualitative data were obtained. Data collection strategies consisted of quantitative methods in the form of the Cognitive Control battery (pre and post test), and the Copeland Symptoms checklist. Qualitative strategies included parental feedback, qualitative data during therapy sessions (observations and therapeutic notes) and a semi-structured interview with the mother. Data was collected before, after and during the intervention. The intervention consisted of individual therapy with the participant, parent guidance and parallel implementation of the designed board game by the parents with the child-participant. The

quantitative data (from the CCB and the Copeland Symptoms Checklist) from the post test indicated that sensitivity towards distractions remains a concern, and that parental implementation of a board game (incorporating elements of CCT) with a child can possibly have a slightly negative effect on cognitive control functioning. However, the scope of this case study does not allow direct correlations to be drawn between the parental input and the child's cognitive control functioning. It does point to the possibility of heeding caution when implementing a board game to reinforce CCT principles by a parent. Conversely, the findings from the study also indicated that family relations improved. Five qualitative insights emerged: i) increased ability to distinguish between relevant versus irrelevant information in the participant; ii) increase in organizational thought in the therapeutic situation and at home; iii) improved communication between parent and child, resulting in improved skills to maintain discipline; iv) improved interaction among family members; and v) transfer of skills to the mother. The study found that the greatest contribution of the board game appears to be the improvement experienced in the family context – probably as a result of increased interaction among family members and attention focused on the problem.

**Key words:**

- Board game
- Parent guidance strategy
- Cognitive Control Therapy
- Home environment
- Attention Deficit Hyperactivity Disorder
- Games in therapy
- Middle childhood phase
- Systems theory
- Game design and development
- Intervention

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## 1.1    INTRODUCTION

The purpose of my research is to explore the impact of a board game as a parent guidance strategy to reinforce Cognitive Control Therapy[1] in multiple contexts of a child's life with Attention Deficit Hyperactivity Disorder[2] (such as the therapeutic as well as the family context).  The board game, based on the principles of CCT, will be used to involve parents of children displaying symptoms of Attention Deficit Hyperactivity Disorder (ADHD)[3] in the therapeutic process.

The statistics relating to children who display symptoms of ADHD indicates that approximately 3-5 percent of primary school learners are affected by this disorder (Dennison, 1990:307; Salend & Rohena, 2003:2).  So, in a primary school with six grade 1 classes approximately six grade 1 learners could be affected by symptoms associated with ADHD, and 6-12 parents and six teachers are faced with the task of assisting these children to adapt in a school environment.

With these statistics in mind, it becomes increasingly important for the primary caregivers[4] involved in the child's life to be active participants in the intervention, aimed at addressing the difficulties associated with ADHD.  According to Green (1997:39), parental support and involvement (as well as the standard of parenting) are interwoven in the treatment of ADHD (Green, 1997:38-39).

Supporting children to manage attention problems is a complex issue – no simplistic answer exists.  It would appear that the most successful approach in dealing with an attention problem currently consists of a multi-disciplinary approach, including a combination of medication, behaviour intervention and sometimes skills training for parents.  This study

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[1]    Hereafter referred to as CCT.  CCT is a form of therapy used for children experiencing difficulties to selectively withhold attention.  See chapter 2 section 2.4.1.

[2]    The term Attention Deficit Hyperactivity Disorder will be used to refer to children with the cluster of behaviour patterns commonly exhibited by children with this condition and is not intended to classify, diagnose, or discriminate against a child in any way.

[3]    Attention Deficit Hyperactivity Disorder will hereafter be referred to as ADHD.  The symptoms of ADHD will be discussed in chapter 2 section 2.2.1.

[4]    For the purpose of this study primary caregivers will refer mainly to the parents (legal guardians) with whom the child lives but can also include members of the child's extended family.

focuses on CCT as a behaviour intervention strategy. CCT is a therapeutic intervention technique involving a structured programme designed specifically to target attention problems (Santostefano, 1995:5). The main purpose of this study is to explore whether the principles of CCT applied in the therapeutic situation, could be reinforced through the use of a structured, fun board game[5] in the home environment. Parents will act as a support system by using a board game to reinforce the principles applied during the therapeutic sessions.

Children suffering from an attention problem do not suffer in isolation, so ADHD can be regarded as a systemic problem[6]. The effect of this disorder permeates multiple facets of the child's life, therefore an intervention that targets the home environment has the potential to form an integral part of the ADHD treatment plan. In this study the parents of a child with ADHD will be regarded as the most significant individuals in the child's system. The researcher acknowledges at this point that members of the child's extended family could also be regarded as significant others and might well be included in the implementation of the game in the family context.

## 1.2    STATEMENT OF PURPOSE

The purpose of the proposed study is to explore the impact of a board game as a parent guidance strategy to reinforce CCT in the child's home environment.

## 1.3    PROBLEM STATEMENT

### 1.3.1    PRIMARY PROBLEM STATEMENT

How can a board game be used as a parent guidance strategy to reinforce CCT in a child's home environment?

### 1.3.2    CRITICAL QUESTIONS

- ✤    How can the constructs of CCT be accommodated in a board game for children in the middle school phase?
- ✤    How can parents reinforce CCT in the home environment by using a board game?
- ✤    What effect does parental involvement have on the CCT process?

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[5]    Compare chapter 3.
[6]    ADHD as a systemic problem will be discussed in section 1.5.2 of this chapter based on the Systems theory and again in chapter 2 section 2.2.2.

## 1.4 DEFINING KEY CONCEPTS

### 1.4.1 BOARD GAME

A board game[7] can be defined as a structured game with *specific rules of interaction* (Bellinson, 2002:2). In this study the term will refer to a game played by two players on a specific board providing all the elements needed to play the game, based on the principles of the CCT programme: "Find the shapes"[8] (Santostefano, 1995:128-129).

### 1.4.2 PARENT GUIDANCE STRATEGY

According to Du Toit (1994:64) parent guidance can be regarded as the provision of conscious guidance to parents in order to assist them with the complicated task of raising their child. In this study a parent guidance strategy can be seen as **any tool used to facilitate parent guidance**, and will take on the form of facilitation by the therapist rather than *conscious guiding.* However, the aim remains to enable the parent to be better equipped for the task of parenting a child with ADHD. Parental involvement in the therapeutic process will be accomplished by implementing a parent guidance strategy – in this case a board game. Parent guidance in this context aims to:

✥       Communicate the principles of CCT to the parent in a "hands-on" and practical way. The parents are given the opportunity to experience it first-hand while playing the board game with their children.

✥       Teach parents through experience and active involvement in a collaborative and co-operative process, rather than by means of a therapist giving advice or passing knowledge to the parent.

This collaborative and co-operative process could result in parents playing an important role in CCT therapy and becoming part of the collaborative team in which parents will act as co-therapists in reinforcing CCT by means of a board game (Kendall & Choudhury, 2003:93).

### 1.4.3 COGNITIVE CONTROL THERAPY (CCT)

CCT is a playful therapeutic approach designed to address cognitive dysfunctions that can contribute to a child experiencing difficulties in school (Santostefano, 1995:1). CCT as a therapeutic intervention consists of the following programmes: (1a) *Who is me? Where is*

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[7]      See chapter 3 for a detailed discussion on the development of this board game.
[8]      "Find the shapes will be discussed in chapter 2 section 2.4.1.2.

*me?* (1b) *Moving fast and slow*, (2a) *Follow me*, (2b) *Which is big? Which is small?* (3) *Find the shapes*, (4) *Remember me*, (5) *Where does it belong?* (Santostefano, 1995:51). Each of these programmes aims to rehabilitate the dysfunctional cognitive structures preventing a child from functioning in a well-adapted manner, as well as from performing at school (Santostefano, 1995:1).

For the purpose of this study CCT will refer to *therapy with field articulation cognitive control, programme 3: find the shapes* (Santostefano, 1995:128-129). According to Santostefano (1995:128) *field articulation cognitive control defines the manner in which a child scans, articulates, and responds to a field of information in terms of what is relevant and irrelevant for the task at hand* (Santostefano, 1995:128).

The central focus of this study is on the principles of CCT (which the board game will aim to reinforce), as well as the people who will work towards the reinforcement, namely the parents.

### 1.4.4 HOME ENVIRONMENT

The home environment can be seen as a physical space or a place where a family lives. It is however also experienced emotionally in a particular way and implies an underlying togetherness (Pretorius, 1998:56). In this study the home environment will refer to the permanent residence of the child with symptoms of ADHD and her parents (this could also include significant others living with the family or visiting).

### 1.4.5 RELATED CONCEPTS

### 1.4.5.1 Attention Deficit Hyperactivity Disorder (ADHD)[9]

When attempting to define ADHD, the most logical place to start, in the researchers' opinion, should be the classification system (Diagnostic and Statistical Manual fourth version [DSM IV – TR]) used by psychologists and other practitioners in the process of diagnosing a child with ADHD. According to the DSM IV (American Psychiatric Association, 2000:85), ADHD is classified according to five criteria[10]:

✥    Criterion A can be seen as an unrelenting or constant pattern of inattention and/or hyperactivity-impulsivity that occurs more frequently and is more severe than

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[9]   ADHD will be discussed in more detail in chapter 2 section 2.2.1.
[10]   Compare chapter 2, table 2.1 for DSM IV-TR criteria for ADHD.

expected of someone at a particular developmental level (American Psychiatric Association, 2000:85).

↳ The appearance of some hyperactive-impulsive or inattentive symptoms which cause impairment, should have an onset before age 7 and makes up Criterion B. The Inattentive symptoms are however often only diagnosed at a later stage (American Psychiatric Association 2000:85).

↳ Criterion C represents the presence of impairment in at least two areas of the child's life, for example family life and the school environment (American Psychiatric Association, 2000:85).

↳ To meet Criterion D, impairment in the developmentally appropriate social and academic functioning of the child should be evident (American Psychiatric Association, 2000:85).

↳ Finally, Criterion E states that ADHD does "not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder. It should not be better accounted for by another mental disorder (e.g., a Mood Disorder, Anxiety Disorder, Dissociative Disorder, or Personality Disorder) (American Psychiatric Association, 2000:85).

In other words, ADHD can be seen as a disorder that can cause a child to appear incapable of paying attention or as 'always on the go'; much too active and impulsive; or a combination of the afore-mentioned. For the purpose of this study the focus will be on one of the subtypes of ADHD, which has to do with the inability to withhold attention selectively from irrelevant stimuli (ADHD Predominantly Inattentive Type). This inability should be inappropriate to the developmental level of the child and should have serious implications for academic achievement (Wenar & Kerig, 2000:120).

In other words, the definition of ADHD for this study will be **a problem in sustaining attention to a task due to the child's inability to withhold attention selectively from irrelevant stimuli.**

## 1.4.5.2 Games in therapy

Games appear to have existed for as long as mankind has. Archaeological studies and excavations have led to the discovery of many ancient and prehistoric games. In those early years, it would appear as if games had a lot to do with adaptation and survival, as the games demanded physical strength and agility (Schaefer & Reid, 2001:3). In the context of this study, adaptation and survival have less to do with physical strength. Yet, adaptation is still vital for human existence. In this study a child with ADHD needs to adapt and survive in a

family environment, social settings and in the classroom situation, something that could prove to be very challenging at times.

The premise this study is based on is that the "survival" of the child with ADHD may thus be assisted through an intervention strategy making use of their most natural instinct: playing. Children with ADHD are **not** unable to pay attention: they simply pay attention to a task that they enjoy and at the same time find it hard to withhold attention selectively from what they perceive to be more enjoyable tasks (Sears & Thompson, 1998:4). It is envisaged that games, and in this instance a board game, could be enjoyable to children, thus captivating their attention, while at the same time engaging them in a survival course by reinforcing the principles of CCT.

The types of games that can be used in therapy are numerous. Some of the well-known methods of play therapy are puppets, storytelling, bibliotherapy, finger painting, music therapy, sand play, ball play and board games (Kaduson & Schaefer, 2003:159-271; Schaefer & Cangelosi, 2002:161-311). As mentioned in section 1.1, this study will explore the impact of using a board game to reinforce the principles of CCT.

### 1.4.5.3  Middle childhood phase

The child who will be participating in the study will be selected from the middle childhood phase, which refers to the life stage from age six to twelve, and is characterised by significant cognitive, social, emotional and self-concept development (Louw, Van Ede & Louw, 1999:326). Intervention during the middle childhood phase, aimed at balanced development could ease or enhance later development (Louw *et al* 1999:326). The chances of the board game having a long-term positive effect on especially cognitive functioning may therefore increase drastically if its use commences in the middle childhood phase. As far as social, emotional and peer development is concerned, children in this phase of life are too old to play or act out as required in play therapy and yet too young to verbalise like an adolescent would (Bellinson, 2002:3). *They are primarily at the shrugging, silent, "Fine," "Nothing" stage of communication. They do play board games though* (Bellinson, 2002:3). For this reason it is envisaged that a board game could appeal to children in the middle childhood phase.

## 1.5	CONCEPTUAL FRAMEWORK OF THE STUDY

### 1.5.1	SANTOSTEFANO'S THEORY ON COGNITIVE CONTROL THERAPY

This research is informed by Santostefano's theory on cognitive control as a possible intervention technique for children with an attention problem (Santostefano, 1995:8). Santostefano developed this form of therapy because he was of the opinion that children who have an attention deficit of some nature, cannot be effectively treated by engaging them in therapy that requires them to explore their inner thoughts, fantasies and emotions.  The theory also states that engagement through play therapy will not be effective, as the cognitive structures required for these very procedures, are dysfunctional and remain unmodified after completion of the therapy (Santostefano, 1995:4-5).

The question can be raised why the research intends utilizing a board game, which is regarded as a form of play therapy.  At this juncture it is important to point out that the board game developed in this research is structured, concrete, and not based on any form of fantasy or imaginative play, but rather on the concrete principles of CCT.  Thus, in the researcher's opinion, it does not tap into dysfunctional cognitive structures as conceptualised in CCT theory (Santostefano, 1995:4-5).  Furthermore, the board game will be based on the principles of CCT - and the goal of CCT is to rehabilitate particular dysfunctional cognitive structures that seem to contribute to attention problems – so that children with attention problems are enabled to cope with the requirements of reality and fantasy, as well as to apply appropriate affect and behaviour in their everyday lives (Santostefano, 1995:4-5).

As mentioned earlier, effective learning can only take place if the child's cognitive structures are functional (Santostefano, 1995:12).  Five cognitive controls involved in the process of effective learning form part of Santostefano's theory and are now discussed briefly:

### 1.5.1.1	Body-ego-tempo regulation

This process of cognitive control involves the manner in which the body and body motility are represented and regulated through the use of images or symbols.  The ability to differentiate between different perceptions and representations of the body (for example walking slowly like a snail, versus walking fast like a cheetah) becomes more differentiated with age (Santostefano, 1995:13).  Young children will move at more or less the same speed in both the above instances, but this will become more refined as they mature.  Such cognitive control needs to be in place in order for children to learn to direct their attention and register body sensations and movements appropriately (Santostefano, 1995:84).

### 1.5.1.2   Focal attention

This relates to the manner in which a field of information is surveyed or scanned.  It can be done in an active or passive fashion, or covering a narrow or wider area (Santostefano, 1995:13).  Therapy with *focal attention* aims to help children keep their head oriented forward while following the target only with their eyes (Santostefano, 1995:112).

### 1.5.1.3   Field articulation

"Field articulation" refers to the way in which a person reacts when faced with stimuli that are either relevant or irrelevant to the task at hand.  At first attention is directed to both relevant and irrelevant information, but as children mature it becomes easier to withhold attention selectively from irrelevant stimuli, while only directing attention to information relevant to a specific task (Santostefano, 1995:13).  The implications of this programme are that it may contribute to a child being better equipped to distinguish between relevant versus irrelevant information (Santostefano, 1995:133).

### 1.5.1.4   Levelling-sharpening

This cognitive control concerns the manner in which images are differentiated so as to enable a person to notice subtle differences when comparing past information to present information (Santostefano, 1995:13).  The levelling-sharpening programme aims to improve the size and length of memory (Santostefano, 1995:148).

### 1.5.1.5   Equivalence range

This cognitive control concerns the grouping and categorizing of information.  Grouping is initially based upon a few narrow and concrete categories (in young children), but gradually expands to broader categories based on more abstract concepts (older children) and/or incorporates functional characteristics for grouping purposes.

The afore-mentioned cognitive controls are interdependent in the sense that they form a hierarchy, whereas the higher cognitive controls rely on the effective functioning of lower cognitive controls for effective functioning (Santostefano, 1995:15). Based on the five cognitive controls and the hierarchy in which they are found, a rehabilitation plan (for dysfunctional cognitive structures) was developed. This plan consists of different programmes and also follows a hierarchy where the first programme employs the least complex cognitive controls, whereas the final programme requires the most complex

cognitive controls (Santostefano, 1995:50-53). The programmes of which the rehabilitation plan consists are discussed next, based on the research done by Santostefano (1995:85-191); Engelbrecht (1996:203-204) and Eloff (1997:192-197).

- **Programme 1A: Body ego-tempo regulation – Who is me?  Where is me?**

The tasks in the programme aim to make children aware of their bodily sensations and movements, so that their capacity to perceive and describe these are developed.  They then need to represent these sensations and movements by making use of gestures in a symbolic way.  Representations will be made in the form of static positions (for instance standing), dynamic positions (for instance crawling) and through static and dynamic relations to other objects (for instance wearing various clothing).  In the process they will learn that their gestures express meaning and are interpreted by others accordingly.

- **Programme 1B: Body ego-tempo regulation – Moving fast and slow**

In this programme the focus is on varying body tempos executed in either large or small settings, and understanding that different tempos convey different meanings to others. Examples of tasks are: using the entire body in an unrestricted space and using only the hand and arm to move a pencil in a small space.

- **Programme 2A: Focal attention – Follow me**

The purpose of the tasks is to direct and sustain attention on moving objects.  Experiences offered will promote the development of the capacity to use passive scanning efficiently during the process of symbolic functioning.  Tasks progress from where children track neutral concrete objects by walking alongside them, to tracking the same object while sitting down, keeping the head still and tracking only with the eyes.  The same progressive process is then followed with objects that become increasingly symbolic.

- **Programme 2B: Focal attention – Which is big?  Which is small?**

The goal of this programme is to engage the child in active and systematic scanning of information.  Experiences are offered that promote the development of the capacity to use active scanning efficiently during the process of symbolic functioning.  Children will perform tasks where comparing two sets of information varying in only one or two dimensions is required, for example the objects of information will first be located close to one another and will gradually be moved further apart.  Later, complexity is also increased by introducing more dimensions of variance in the objects presented.

- **Programme 3: Field articulation cognitive control – Find the shapes[11]**

This programme contains more complex cognitive activities and requires that the child has already mastered Body-ego-tempo cognitive control as well as "Focal attention" cognitive control.  It addresses children's ability to selectively focus their attention on concrete ("as is") information, as well as on information transformed by means of symbols and fantasies in the process of symbolic functioning.  This information is initially characterised as relevant, but irrelevant information is added as the tasks become progressively more complex.

- **Programme 4: Levelling-Sharpening - Remember me?**

The purpose of this programme is to develop the ability to construct progressively more complex fields of information.  The child is expected to handle external information as it is, as well as information transformed by means of the process of symbolic functioning.  The construction of the information must be kept stable and must be related to present perceptions.  The tasks are based on the principle that the therapist creates a field of information; shows it to the child; then covers it; then alters it.  The therapist then uncovers the field of information, asks the child to identify the change (if any), and finally to restore it to its previous construction. The fields of information created by the therapist become increasingly complex as therapy progresses.

- **Programme 5: Equivalence range - Where does it belong?**

Programme 5 aims to develop the ability to categorise information that is *"narrow and broad, concrete and abstract, and to learn the utility of these concepts"* (Santostefano, 1995:170).  The therapist introduces an object to the child who then categorizes the object in terms of its physical or functional characteristics.  Next, other objects with the same characteristics are grouped together with the above-mentioned object; then the groups or categories are evaluated.  After this the groups are broken up and the objects are used to form new and different groups, based on different characteristics.

The theory of CCT (specifically programme 3: "Field articulation cognitive control – find the shapes") will form the basis of the study, as the board game will be based on these principles.  Through the use of the board game the study aims to reinforce new, functional cognitive structures, which can be facilitated by the use of CCT.

### 1.5.2 SYSTEMS THEORY

The importance of parental involvement and the emphasis placed on the family system in this study makes it imperative to include systems theory.  Systems theory states that each

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[11]  The steps of this programme can be found in chapter 2 section 2.4.1.2, table 2.2.

system contains its own parts, regulated by boundaries. These boundaries define which parts belong to the system. There are reciprocal relationships among the parts of a particular system – whatever happens to one part of the system influences other parts present in that same system (Thomas, 2000:537-538).

Bronfenbrenner is considered to be the father of the systems theory and according to his model a distinction needs to be made between Micro, Meso, Exo, Macro and Chrono systems existing in the child's life (Adelman & Taylor, 2002:51-53).

- ✎ Micro system: This includes the systems that the child is directly involved with on a day-to-day basis and where daily activities occur, for example the family and the school systems (Adelman & Taylor, 2002:51-53).
- ✎ Meso system: On this level the micro systems interact with one another, resulting in influences or events occurring in one system, having an influence on the other systems (Adelman & Taylor, 2002:51-53).
- ✎ Exo systems: The child is not directly involved in these systems but the systems have an influence on, or are influenced by people in the micro systems. Examples are a parent's place of work, a siblings' peer group or a local community organisation (Adelman & Taylor, 2002:51-53).
- ✎ Macro systems: This includes the dominant social structures, values and beliefs that have an influence on or are influenced by all other levels of systems (Adelman & Taylor, 2002:51-53).
- ✎ Chrono systems: Developmental reciprocity of systems is at play here, where a particular system is always in a state of development. This has an influence on other systems and on the child, who is also at a particular developmental stage.

Because of the many different levels of systems encompassed by this model, a graphic representation follows on page 12.

Systems theory could serve to support the presupposition that positive effects experienced in one part of the system, could at some time have a positive impact on other parts of the system. The different parts of the system, as mentioned earlier, could include areas relating to the home environment – such as parenting, discipline, and relationships between different family members – as well as school related issues – such as attitudes in the classroom and school performance.

**FIGURE 1.1:** GRAPHIC REPRESENTATION OF THE SYSTEMS THEORY
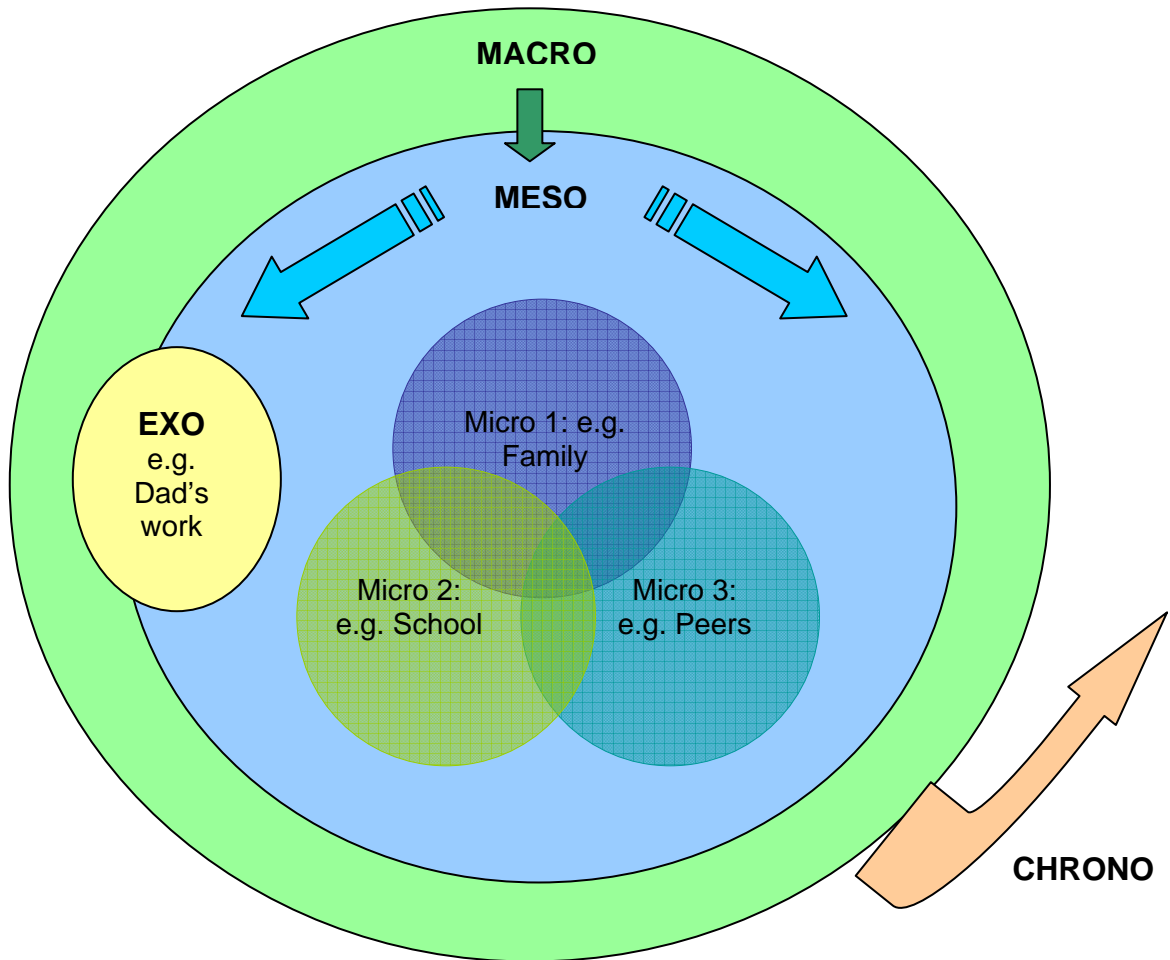


## 1.6 RESEARCH METHODOLOGY AND STRATEGY

### 1.6.1 PARADIGM: INTERPRETIVIST

In this study the interpretivist paradigm is used. This approach places an emphasis on understanding the meaning assigned to people's own experiences (Schwandt, 2000:191; Jansen, 2004:380). The experiences relevant to this study are those of parents of children with ADHD. The focus will be on understanding the meanings they assign to their experience of the process of implementing the board game. To ensure that the participants' meanings are truly their own and can be regarded as trustworthy, they will be allowed to have access to interpreted interviews, in order to confirm the construction of meaning contained in it. Furthermore, open-ended questions will be used when conducting semi-structured interviews, thereby ensuring that the participants give their own meaning and are not being led by the questions.

**TABLE 1.1:     INTERPRETIVIST PARADIGM**

| PARADIGM | ONTOLOGY | EPISTEMOLOGY | REPORT[12] |
|---|---|---|---|
| Interpretivist | Reality can be understood and interpreted but not predicted or controlled. | Knowledge arises from observation and interpretation. | Description of day-to-day events experienced in the field, or description of feelings. |
| Taken from De Vos (1998:246) | | | |

The interpretivist paradigm was chosen for this particular study because it is the researcher's opinion that one can only really explore the effect of the implementation of the board game in the home environment by interpreting the experience of the family who uses it.  Knowledge on this subject can only be obtained through observation and interpretation of the process of implementation (See table 1.1).

**1.6.2    RESEARCH DESIGN**

A case study will be used as research design because case studies are known to clearly illustrate a particular phenomenon.  A case study could offer the opportunity to work closely with the family as a whole, assessing the process of implementation of the board game, as well as the impact, if any, that it had on the broader family system and on the school/classroom environment.  It could provide the researcher with the opportunity of examining to what extent the board game allows for reinforcement of the principles of CCT. This type of design explains by example how the phenomenon appeared.  It is thus easier to relate to and to understand (Cohen, Manion & Morrison, 2000:181).  The use of a case study also invites the use of different types of (qualitative and quantitative) data (Denscombe, 2003:31).

The research will be done using a mixed methods approach, which is a combination of qualitative and quantitative approaches in a single study (Maxwell & Loomis, 2003:241).  It is the researcher's opinion that neither a qualitative nor a quantitative approach alone would yield sufficient information on the proposed topic, as a quantitative approach would not yield the emotional aspects of the implementation of the board game in the home environment. On the other hand, a pure qualitative study would not allow the researcher the opportunity to compare results in order to determine the impact of the board game.  The advantages of both approaches combined will establish the best-suited approach for this particular study.

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[12]    The aspects referred to under the column "report" will be discussed in the sections that follow.

Quantitative data will be collected using two sources. The first would be the quantitative data obtained from the Cognitive Control Battery (CCB) – Fruit Distraction subtest. The results from the CCB - FDT indicate a tendency in a child for attention problems and also whether a child's attention problem is the result of an inability to withhold attention selectively from external stimuli – like movements, noises or objects in the child's environment – or whether it is due to an inability to withhold attention selectively from internal stimuli – like the child's own thoughts, feelings and fantasies – or both. Based on the scores of the CCB - FDT an individual profile of attention deficit emerges. This data will be used as pre and post tests in order to determine if any improvement in the individual profile of the child (and consequently her ability to selectively withhold attention from irrelevant information) is evident when comparing the results of her profile before commencement of the therapeutic process and again after termination thereof.

The second set of quantitative data will be gathered from the Copeland Symptoms Checklist[13], which will be completed by parents and teachers and used as pre and post tests. This checklist needs to be completed by both parties as the criteria for ADHD state that the symptoms need to be present in more than one context of the child's life.

Verschuren (2003:128) refers to the use of case studies in a quantitative approach as risky because participants are usually tested at one particular time, when they are not in their own environment and when outside forces that have an impact on the subject are not in play. When reference is made to symptoms of ADHD, as is the case in this study, many of the "outside forces" impacting on the child (external and internal stimuli) are present in any situation. Secondly, in this study, two different sets of quantitative data will be used: profiles from the CCB, and the Copeland Symptoms Checklist, together with several sources of qualitative data. More than one method of data collection will be used for purposes of triangulation. The advantages of triangulation are that it limits researcher bias, as similar findings from different methods lend a greater credibility to research (Cohen *et al* 2000:112). Apart from the use of different data sources, the process of collecting data will follow the therapeutic process over a period of time. This will decrease the effect of obtaining data that reflects performance on one specific day only.

Another way in which this issue will be addressed is that data will be collected in a qualitative approach by interpreting a semi-structured interview and feedback from the parents, based on their observations regarding the process and progress of the child while using the board game. This data will be collected mainly from the parents of the child-participant and will

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[13]  The Copeland Symptoms checklist is a parent and teacher questionnaire aimed at determining ADHD symptoms which are presented by a child in a certain context be it at home of at school.

therefore be from the child's own environment. The researcher's own observations of the child in every therapy session and records of her progress will also form an important part of the qualitative data in monitoring the reinforcement of CCT.

The standardised measures will thus be used firstly as a means whereby a suitable case study for this research can be selected. The findings obtained by these measures will then be used to determine the findings of the study, in conjunction with the meanings assigned by the various role players, as well as observations and reports on the progress and the process of the implementation of the board game.

### 1.6.3    SAMPLING

Using a case study enables the researcher to make use of purposeful sampling, which allows the selection of cases rich in the types of information needed for the intended research (Patton, 2002:230). The purposeful sampling strategy used in the research is criterion sampling (Patton, 2002:243), which enables the researcher to select a research participant who shows symptoms of ADHD with special reference to inattentiveness.

Criterion sampling will be utilised: a child in the middle childhood phase, who experiences difficulties in withholding attention selectively, and her mother[14], will be selected at the Training Facility of the University of Pretoria[15]. The suitability of the participants will be determined by an assessment done by a Master's student, using the Copeland Symptoms Checklist (completed by the parent(s) and the teacher), as well as the CCB - FDT. The most important criteria that need to be met are problems in sustaining attention to the task at hand due to difficulties in selectively withholding attention from irrelevant information.

After the assessment the child will be referred to the researcher. This type of sampling can be seen as convenience sampling in that it will be "built upon selections which suit the convenience of the researcher and which are *first to hand*" (Denscombe, 2003:16).

The child selected will attend formal CCT sessions with the therapist twice weekly at the Training Facility at the University of Pretoria's Department of Educational Psychology. During the rest of the week her mother will use the board game at home to reinforce those principles dealt with in the session. Frequency of use of the board game during the week will

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[14]    Even though it was the intention that both parents be involved in the study, it was evident from the start that the mother would be the one who would play the game with her child, and give feedback to the researcher.

[15]    This training facility offers psychological services, performed by Honnours and Masters degree students in Educational Psychology, as part of their clinical training, under the supervision of registered Educational Psychologists.

be determined by the commitment and schedule of the parents. Ideally the game should be played on all the days when no therapy sessions take place.

### 1.6.4   DATA COLLECTION

Data will be collected by means of:

- ✎   Quantitative data from the Fruit Distraction Test on the Cognitive Control Battery before therapy commences and after it is terminated.
- ✎   Quantitative data from the Copeland Symptoms Checklist before therapy commences and after it is terminated.
- ✎   Qualitative interpretation of the feedback from the parents on the progress and process of the use of the board game.
- ✎   Qualitative data obtained from the therapeutic situation through observation.
- ✎   Qualitative data received from the child in the form of her comments during therapeutic sessions, as well as data from the school in the form of feedback from teachers and/or academic reports.
- ✎   Qualitative data derived from a semi-structured interview with the mother on her experience and feelings about the implementation of the board game in their home environment.

### 1.6.5   DATA ANALYSIS

The results as obtained from the Fruit Distraction Test on the Cognitive Control Battery will be scored and interpreted according to the instructions and norms set out in the CCB Manual by Sebastiano Santostefano (1998). The scoring instructions and criteria for interpreting the Copeland Symptoms Checklist[16] are included in the checklist.

The semi-structured interview will be recorded on audiotape. The contents of the interview will be described after the researcher has searched for meaning assigned by the parents, and having categorizing these. Finally, qualitative insights crystallising from these categories will be identified (Cohen *et al* 2000:282; De Vos, 1998:337).

Qualitative data obtained from the therapeutic situation will be documented through a process of observation and note-taking (or field notes). The use of observational notes will give detailed accounts of what happened in the sessions, who said what and when it occurred. There is little interpretation involved in observational notes. A second type of note-

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[16]   The Copeland Symptoms Checklist can be found in Appendix A.

taking – theoretical notes – will form part of the therapeutic sessions, serving to interpret, identify patterns and explain the events noted (De Vos, 1998:285-286).

Qualitative data received from the child as well as the school will be recorded and used as a means to evaluate any progress made during the therapeutic process. Progress made by the child in each session will be noted in the observations and combined with other qualitative data to determine the influence the board game has had on the reinforcement of the therapeutic process.

### 1.6.6  ETHICAL CONSIDERATIONS

In this study the following ethical considerations will be adhered to:

- Informed consent will be obtained from the parents of the child involved.
- The researcher will be honest towards the research participants with regard to the outcome of the quantitative measures as well as the progress (if any) made in therapy.
- In order to safeguard the participants from any kind of harm, be it physical or psychological (emotional), the researcher must be aware of the feelings and sensitivities surrounding families with children who are challenged by attention problems.
- Absolute confidentiality will be maintained with regard to the participant's personal information, especially when in communication with the school and teachers.
- Extreme caution will be applied in order to limit the misinterpretation of data, by maintaining open communication with all participants and making notes available for them to read and by ensuring that they were understood correctly.
- The research results will be communicated to the participants (McMillan & Schumacher, 2001:196-198).
- The intervention with the child-participant will continue until satisfactory progress is displayed – even though the study is completed.
- Permission from the Head of Department Educational Psychology of the University of Pretoria will be obtained to select a client from their training facility and then to use the training facility's premises to conduct the therapy.
- Ethical clearance will be obtained from the Ethics Committee of the University of Pretoria prior to commencing the research.
- The researcher will adhere to the guidelines as set out by the Health Professions Council of South Africa regarding the regulation of the activities of an Intern Educational Psychologist in conducting research. In this regard all professional acts

will be performed under supervision of a registered psychologist and will be limited to acts directly related to the topic under investigation, as contained in this research.

### 1.6.7 ROLE OF THE RESEARCHER

In this study the role of the researcher will be that of:

- A therapist, working together with the child and her mother.
- A facilitator of parent guidance with regard to the use of the board game.
- Empowering the mother with knowledge regarding issues relating to ADHD.
- An observer of behaviour as well as of the progress of therapy.
- A developer or designer in the process of creating the board game.

### 1.6.8 LIMITATIONS OF THE STUDY

Due to the fact that data will be gathered from a single case study, the research findings will not be generalisable, as the sample used in this case is not representative of the total population of children who have a problem sustaining attention on the task at hand. It is however not the aim of this research to generalize the findings to the general population, but rather to examine the possibility of (a) reinforcing the principles of CCT, (b) using the board game as a method for reinforcement of therapeutic content and (c) determining whether any of the principles permeate to other areas of the participants' lives.

To be in a position to explore the possibility of reinforcing CCT by using a board game, it is of great importance that the board game be properly implemented at home. The researcher, however, is not in a position to ensure that this will happen and has to rely on the commitment and co-operation of the mother as well as on her feedback.

Finally the researcher needs to be sensitive towards the possibility of researcher bias especially with regards to the fact that the researcher is passionate about this game. In an attempt to limit researcher bias, the researcher will have supervisory discussions addressing any issues that may emerge as the research progress and during the interpretation of all data. The researcher will also aim to establish a certain degree of objectivity by having a reflection session after every therapeutic session.

### 1.6.9 POTENTIAL CONTRIBUTIONS OF THE STUDY

It is envisaged that the introduction of the game will enhance the outcomes of CCT and that it may lead to children progressing faster in the therapeutic process. The improved

performance of the child with an attention problem in CCT may also bring about an improvement in academic performance in general.  The effects of the board game may also flow through to other areas of the child's life, for example family relationships and discipline.  Apart from the possible positive effect on the different systems in the child's life, the introduction of the board game in the home environment may lead to parent empowerment and education.  It could be anticipated that through the use of the board game as a parent guidance strategy, therapists and families will unite and work together in the process of managing attention problems.

The study of the effects of this board game will constitute a new knowledge base, as CCT has never before been studied in the context of reinforcement through a board game.  The interpretation of individual experiences regarding the implementation of the board game could enhance its development and shed light on the applicability of the game as an intervention strategy.  This applied research could offer therapists and parents additional resources and unite them in their attempts to assist children with attention deficits.

## 1.7     PROGRAMME OF THE STUDY

### CHAPTER 1:  INTRODUCTION AND ORIENTATION

Chapter one introduces the reader to the study and states the purpose of the study, research questions, rationale for the study and the research design.

### CHAPTER 2:  LITERATURE REVIEW

Chapter two represents a literature study, which reflects the conceptual framework for the research.  This will cover aspects relating to:

- ✎ Attention Deficit Disorder: A description of ADHD and its impact on the family (parents and siblings) as well as in the classroom environment.
- ✎ Assessment of ADHD with particular reference to the Copeland Symptoms Checklist and the CCB.
- ✎ Cognitive Control Therapy as intervention for ADHD.
- ✎ Parent guidance as well as the role of the parent in and beyond therapy.
- ✎ Games in the therapeutic environment.

The conceptual framework – containing all the assumptions that underlie the study – will also be discussed in this chapter.

## CHAPTER 3:  THE DESIGN AND DEVELOPMENT OF THE BOARD GAME

Chapter three will consist of a description of the development and design of the board game. Aspects covered in this chapter will include the methodology underlying the development and design process as well as the content and the rules of the board game.

## CHAPTER 4:  DISCUSSION OF THE RESEARCH PROCESS

In this chapter the research process that will be utilized to study how a board game can be used as a parent guidance strategy to reinforce CCT in the home environment of the child with ADHD, will be discussed.  This will be followed by a description of the quantitative data and findings and the qualitative insights which emerged.  Finally an integration of both qualitative and quantitative data will be offered.

## CHAPTER 5:  SYNOPSIS OF FINDINGS, LITERATURE CONTROL, CONCLUSIONS AND RECOMMENDATIONS

This final chapter will contain a discussion of the findings in relation to the relevant literature. Based on these findings, research questions will be answered and assumptions (stated in chapter two) tested.  This will be followed by conclusions as well as recommendations for the future.

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## 2.1    OVERVIEW OF THE CHAPTER

In this chapter a description and definition of ADHD in relation to the specific context of this study is provided.  Reference is made to the history of ADHD and the impact of ADHD on the family system as well as the classroom situation.  A brief overview of assessment is given, with special reference to the CCB as indicative of the appropriate CCT programme that should be selected.  Thereafter the focus shifts to CCT as intervention strategy.  A description of the CCT programme *find the shapes*, on which the board game is based, is given.  Finally parent guidance, as well as the role of the parent in and beyond therapy, is discussed.  The aim of this chapter is to share the unique position of the child with ADHD, to highlight the challenges the families and teachers of these children are faced with and to introduce the different intervention possibilities.

## 2.2    INTRODUCTION

*So what's it like to have ADD[17]? … It's like driving in the rain with bad windshield wipers.  Everything is smudged and blurred and you're speeding along, and it's reeeeally frustrating not being able to see very well.  Or it's like listening to a radio station with a lot of static and you have to strain to hear what's going on.  Or it's like trying to build a house of cards in a dust storm.  You have to build a structure to protect yourself from the wind before you can even start on the cards*

(Hallowell, 1992:1).

Some of the earliest writings on ADHD can be traced back to 1845 when Dr Heinrich Hoffman, a physician, wrote a children's book called *"Der Struwwelpeter"* (Mash & Barkley, 1996:64; Wikipedia, 2006:12).  One of the stories found in this book entitled *"Die Geschichte vom Zappel-Phillipp" is* about a boy named "Fidgety Phillip" (Godwin-Jones, 1994-1999).  This little boy is a very good example of what is known today as a child with ADHD.

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[17]    Some literature sources use the term ADD when referring to ADHD.  The term ADD will be used in quotations but reference in the text will still be made to ADHD.

The period of 1917-1919 brought about more serious mentioning of ADHD. Many children suffered symptoms of ADHD after their brains were affected by the encephalitis epidemic that threatened the people of that time. As a result, what is known today as ADHD was then called Minimal Brain Damage and Brain-Injured Child Syndrome (Mash & Barkley, 1996:64-65). After observations were done in 1966, researchers discovered that the symptoms (of ADHD) occurred even without any pathology or injury to the brain and the condition was subsequently renamed Minimal Brain Dysfunction (Mash & Barkley, 1996:64-65; Wikipedia, 2006:12).

In the 1970's the term Hyperkinetic Disorder was used when referring to ADHD (Chaimberlain & Sahakian, 2006:36). A decade later the name was again changed, and appeared in the DSM-III, as Attention Deficit Disorder (ADD) for the first time. Soon after this, in the revised edition of the DSM-III the term was changed to Undifferentiated Attention Deficit Disorder. Then in 1994, with the release of the DSM-IV-TR, the term Attention Deficit Hyperactivity Disorder was introduced and is still used today (American Psychiatric Association, 2000:85; Wikipedia, 2006:12).

Even though professionals have struggled for decades to arrive at a suitable classification and terminology, the disorder we all know as ADHD has been with us for a while. It would appear that through all this time, scientists have regarded the classification of the disorder as important and the researcher agrees that classification has its role to play in the treatment of ADHD. In this study in particular it serves as common ground between the therapist and the parents. Once parents understand what symptoms encompass ADHD, they may feel more in control of what needs to be done to help their child. Being aware of the classification of ADHD could also lead to parents being more tolerant and understanding of their children's symptoms. However, irrespective of the term used to classify ADHD and the presumed understanding which accompanies it, ADHD has a profound impact on those who live with it every day.

## 2.2.1   DIAGNOSTIC DSCRIPTION OF ADHD

In chapter 1 it became clear that children with ADHD experience a whole range of behaviours. The most distinguishing characteristic, however, is a developmentally inappropriate *persistent pattern of inattention and/or hyperactivity-impulsivity* (American Psychiatric Association, 2000:85). ADHD is often used as an umbrella term and distinguishes between three subtypes. The first subtype is called Attention Deficit/ Hyperactivity Disorder, Combined Type. This subtype is diagnosed if six (or more) symptoms of inattention and six (or more) symptoms of hyperactivity-impulsivity have persisted for at least six months. Most

children and adolescents with the disorder are being diagnosed with this type (American Psychiatric Association, 2000:87).

The second subtype is Attention Deficit/Hyperactivity Disorder, Predominantly Inattentive Type[18]. This subtype is diagnosed when six (or more) symptoms of inattention (but fewer than six symptoms of hyperactivity-impulsivity) have persisted for at least six months. Hyperactivity may still be a significant clinical feature in many such cases, whereas other cases are purely inattentive (American Psychiatric Association, 2000:87).

Finally, Attention Deficit Hyperactivity Disorder, Predominantly Hyperactive-Impulsive Type is characterized by six (or more) symptoms of hyperactivity-impulsivity (but fewer than six symptoms of inattention), which have persisted for at least six months. Inattention may often still be a significant clinical feature in such cases (American Psychiatric Association, 2000:87).

In order to confirm the presence of ADHD and to distinguish the afore-mentioned subtypes, classification in terms of the five categories[19] contained in the DSM-IV-TR needs to take place. The criteria for ADHD are outlined in table 2.1 and indicate the combination of symptoms that should be present to make a diagnosis of ADHD.

**TABLE 2.1:    DSM-IV-TR** DIAGNOSTIC CRITERIA FOR ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

| |
|---|
| A.    Either (1) or (2) |
| (1)    six (or more) of the following symptoms of **inattention** have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level: |
| *Inattention* |
| (a)    often fails to give close attention to details or makes careless mistakes in 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 (e.g., toys, school assignments, pencils, books, or tools). |
| (h)    is often easily distracted by extraneous stimuli. |

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[18]    ADHD Predominantly Inattentive Type will be the focus of this study. The aim of using this disorder is however not to discriminate in any way. These symptoms, as indicated by an assessment with the CCB and the Copeland Symptoms Checklist, are used solely as a guide for the selection of a research participant and for explaining a phenomenon.

[19]    Compare chapter 1 section 1.4.5.1.

(i)      is often forgetful in daily activities.

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

*Hyperactivity*

(a)      often fidgets with hands or feet or squirms in seat.

(b)      often leaves seat in classroom or in other situations in which remaining seated is expected.

(c)      often runs about or climbs excessively in situations in which it is inappropriate (in adolescence 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.

*Impulsivity*

(g)      often blurts out answers before questions have been completed.

(h)      often has difficulty awaiting turn.

(i)      often interrupts or intrudes on others (e.g., butts into conversations or games).

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

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

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

E.      The symptoms do not occur exclusively during the course of a pervasive developmental disorder, schizophrenia, or other psychotic disorder and are not better accounted for by another mental disorder (e.g., mood disorder, anxiety disorder, dissociative disorder, or a personality disorder).

*Code* based on types

**314.01 Attention-deficit/hyperactivity disorder, combined type:** if both Criteria A1 and A2 are met for the past six months.

**314.00 Attention-deficit/hyperactivity disorder, predominantly inattentive type:** if Criterion A1 is met but Criterion A2 is not met for the past six months.

**314.01 Attention-deficit/hyperactivity disorder, predominantly hyperactive-impulsive type:** if Criterion A2 is met but Criterion A1 is not met for the past six months.

**Coding note:** For individuals (especially adolescents and adults) who currently have symptoms that no longer meet full criteria, "in partial remission" should be specified.

(American Psychiatric Association, 2000:92-93).

Based on the introduction of this chapter it is evident that ADHD has been in existence for many years, during which time the term has undergone many conceptual changes. Today, even with a widely acknowledged term and three subtypes included in the classification system, it would appear that ADHD cannot be seen exclusively as a "problem in paying attention" or "being hyperactive". It involves all systems that are linked to it in the sense that parents and teachers need to pay extra attention to children with ADHD to ensure that they finish tasks, follow through on instructions, organize their environment and have the correct "tools for the task" at their disposal. Children with ADHD need to be reminded to adhere to social rules in classrooms and at other social events and their interaction with others needs to be monitored and facilitated throughout.

This study will focus on ADHD predominantly inattentive type. Children with this type of ADHD are often "undiagnosed" until the age of 10 because they cause no behaviour problems in the classroom (Sears & Thompson, 1998:4,14; Green, 1997:6). They do not direct their attention selectively in class and consequently do not follow the teacher, frequently resulting in academic underachievement. This often causes frustration for the child, the parents and the teacher (Sears & Thompson, 1998:4,14; Green, 1997:6).

The afore-mentioned behaviour can be ascribed to the neurological component of the disorder. It hinders the child when processing information and making the most of educational experiences (Voeller, 2004:798). As a result there is several areas where the child will typically experience difficulties, including learning, peer relationships, self-esteem, mood, behaviour, and family relations (Voeller, 2004:798). These difficulties will be discussed in more detail in the next section with reference to its implications for the two most important areas of the child's functioning, namely the family and the school.

### 2.2.2    ADHD: A SYSTEMIC PROBLEM AND ITS IMPLICATIONS

This section will focus on the micro systems[20] relevant to the child's life. These are the systems that have the most significant influence on the child and in turn are influenced the most by the child. As mentioned in chapter 1, these systems all have a reciprocal effect on each other. In this section the child's influence on the parents, the siblings, and the school and vice versa, is discussed.

One opinion about ADHD that many may agree with is that children with ADHD are difficult to raise (Sears & Thompson, 1998:3). They have a *particular cluster of temperament traits that characterize them* (Sears & Thompson, 1998:3). The implications of ADHD are however not only limited to the family environment and when engaging with a child who suffers from ADHD, the impact this disorder has on every area of the child's life cannot be ignored. The two main areas where the implications of ADHD are most visible are probably the family and the school environment.

The impact of ADHD on families is far-reaching. A number of studies (Power, Russell, Soffer, Blom-Hoffman, & Grim, 2002:119; Johnston & Mash, 2001:193; Podolski & Nigg, 2001:511) have illustrated how parents' stress levels are influenced when they have a child with an attention disorder. Findings from these studies indicate that families and children who are affected by ADHD have to cope with increased levels of stress and their relationships are characterised by greater conflict. The behaviour of both parents and children seem to be

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20    Compare chapter 1 section 1.5.2.

negative and controlling.  It furthermore emerged from these studies that mothers, in particular, often felt incompetent as parents. Contributing to the stress are tiredness, confusion and self-doubt (Green, 1997:74).

Apart from parental stress as a direct result of the impact of ADHD, parents may also have consulted with various professionals and endured ample assessments and tests before finding out what is "wrong" with their child.  They are probably also bombarded with people ascribing their child's behaviour to bad parenting (Green, 1997:74). Interventions with families thus often accommodate stress factors and focus on "friendly" activities that alleviate and diffuse rather than exacerbate accumulated stress. This study aligns itself with this approach by using a game that will involve the family in the therapeutic process (a structured play-based activity).  The game is intended for the family to enjoy with the child who receives intervention for ADHD.  The assumption could be that a game may provide a constructive format for conducting an intervention with a family (with a child with ADHD) while the complexities underlying the dynamics of a child with ADHD in a family is not negated.

Parents play a prominent role in managing ADHD.  In most cases they are the primary caregivers of the child and spend a lot of time with the child.  They often have a significant influence on different levels of the child's development and a meaningful discussion of ADHD should thus also include an understanding of the effect ADHD has on parents.

### 2.2.2.1  The effect on parent(s)

The child with ADHD is part of a system, which is involved in, and affected by the manifestation of ADHD.  Becky Milton (2001:1) tells the story of herself and her child who has been diagnosed with ADHD.  She expresses her dismay at the school for blaming her for her son's "behaviour problems" and regrets listening to the "professionals" at school who continually told her to punish her child. "I began to realize that my son was slipping away from me and my family" (Milton, 2001:1).

The so-called "behaviour problems" of children with ADHD can often be traced back to a neurological origin. Neuropsychologists have found that children with ADHD have a weakness in the frontal lobe of their brains (Green, 1997:18).  The frontal lobe is responsible for executive functions namely motivation, attention and sequencing of actions (Sadock & Sadock, 2003:84).  Impairment in this area would thus result in a child being unable to conform to the expectations for good behaviour – i.e. to sit still, to concentrate, to exert control over their own impulses, to obey, to co-operate, to share, to play and to interact appropriately – and as a result are often seen as defiant.  Once a child is labelled as defiant,

the pressure on the parent increases. They are probably already disheartened by their child's behaviour at home and in addition they may have to deal with complaints from teachers as well (Barkley, 2000:92).

According to Wenar and Kerig (2000:122) mothers respond in a more negative and less rewarding way towards their children with ADHD. The authors also report an increase in conflict between father and child, although to a lesser extent than in the mother-child relationship. It would, however, appear that the negativity improves once treatment reduces the symptoms of ADHD (Wenar & Kerig, 2000:122). The possibility exists that the negative reactions and increased conflict between parents and children often stem from parents being uninformed with regard to ADHD. They may not know why their child acts in a certain way and therefore wrongly interpret the behaviour as non-compliant or even defiant.

Lack of knowledge and understanding of their child with ADHD could lead to parents losing confidence in their own ability to raise their *impossible-to-manage-child*, as Green (1997:5) indicates, often becoming increasingly punitive. The fact that children with ADHD always want more love and attention exacerbate this situation. Even though parents spend more time with their child with ADHD, they often seem to be in disagreement (Simmons & York, 2006:2; Sears & Thompson, 1998:161). This may be ascribed to the fact that children with ADHD are not emotionally and socially mature (in accordance with their age) and as a result they do not show the necessary understanding and common sense that is expected of them (Green, 1997:6). The researcher can relate to the findings and acknowledge the fact that this characteristic may complicate the task of parents who want their children to receive all the love they need. The possibility that all these variables may lead to guilt-ridden parents comes to the fore. It is the researcher's opinion that these underlying feelings constitute a significant part of the total impact of ADHD on those confronted with it. Probably one area where the influence of these feelings of guilt can become most visible is when parents may start to believe that they could in some way be responsible for their child's 'unacceptable' behaviour. Some parents may even feel anger and resentment towards parenting as a whole or even towards their child (Simmons & York, 2006:2; Green, 1997:75).

Tynan (2005:2) acknowledges the fact that raising a child with ADHD is not without challenges. He notes that educating and informing parents as well as introducing support groups, may help parents adapt to their circumstances (Tynan, 2005:2). It is envisaged that the introduction of a board game in the family system will fulfil the roles of educating, and supporting children with ADHD as well as their families. The role of the researcher will not be to educate, but rather to facilitate the process of understanding ADHD and to support the child with ADHD. To achieve this, it will not only be vital to involve parents in the process of

therapy but, even more importantly, to gain their co-operation – especially in light of the previous paragraph where the emotional load that ADHD places on parents became evident. The researcher will need to be particularly sensitive towards the emotions of the mother; the possibility that she may feel reluctant to engage in therapy (for various reasons, e.g. fear of failure, complicating parent-child relationships, time pressures etc.) should be acknowledged and kept in mind throughout. Working with parents and their children with ADHD require much understanding, sensitivity and empathy on the part of the researcher.

However, not all characteristics or symptoms associated with ADHD are negative. Many great men who had a substantial impact on the world, such as Thomas Edison, Winston Churchill and Wolfgang Amadeus Mozart, are reported to have had ADHD (Sears & Thompson, 1998:3). All these influential men used their 'disorder' to their own advantage and, instead of being labelled as distractible, impulsive or hyperactive, their qualities are called *creativity, energy, spontaneity and ability to focus intently* (Sears & Thompson, 1998:3). Thus in spite of the vast negative impact of ADHD, parents can also focus on the positive aspects of ADHD if they know what these are and how to bring them out in their child. Parents may become aware of the positive traits through spending focused time with their child. The time and attention bestowed on the child with ADHD often become part of the challenge the siblings are faced with. The various challenges will now be discussed.

### 2.2.2.2  The effect on siblings

In a house where one child has ADHD life will not be free from challenges for the siblings. Children with ADHD often react impulsively and emotionally, thereby possibly exposing their siblings to uncomfortable confrontational situations (Green, 1997:77; Sears & Thompson, 1994:17). The siblings may feel that they are being treated unfairly and may from time to time be blamed for something their sibling with ADHD did (Simmons & York, 2006:2; Green, 1997:77). Children with ADHD often exhibit great difficulties in delaying gratification. As a result they may be inclined to invade the space of siblings at times that appear to be inappropriate – especially when they are studying for exams or when they invite a friend over to visit (Simmons & York, 2006:2; Green, 1997:78-79; Sears & Thompson, 1994:20).

When a child with ADHD and their siblings are in the same school, this also poses its own unique challenges. Apart from the normal issues that a child has to cope with in a class situation, these siblings are often faced with additional challenges in the form of remarks made about their brother's or sister's behaviour. The child is not in a position to do anything about the sibling's behaviour and may experience such statements as very hurtful (Green, 1997:78).

Having a child with ADHD in the house often not only poses challenges for the child, the parents and the siblings individually, but also as systems connected to each other. They form micro systems that have a profound influence on each other and affect the atmosphere in the house. The home is however, not the only place where challenges need to be faced and adjustments are required. The classroom situation is another environment where the symptoms of ADHD make coping very difficult.

## 2.2.3    THE EFFECT ON THE CLASSROOM ENVIRONMENT

The classroom is usually where attention problems are detected (Chaimberlain & Sahakian, 2006:35). As soon as a child with ADHD enters the classroom, the teacher becomes a prominent role player in the process of identification of learning difficulties, which are often associated with children with ADHD (Sears & Thompson, 1998:172). If teachers are informed about ADHD, they could assist the parents to take the first step on the road to intervention.

When teachers are empowered it helps them to realise that when a child with ADHD enters the classroom their impulsive and "loud" behaviour in class is not intentional or aimed at hindering the teaching and the learning process. Of equal importance is the fact that children with ADHD – Predominantly Inattentive Type – often do not show overt behaviour and therefore don't draw attention to themselves, causing them to often go unnoticed (Lerner, 2000:540; Picton, 1999:1). In cases like these it seems meaningful if teachers were made aware of the symptoms associated with ADHD as well as the different subtypes that can occur.

In the school environment, challenges often relate to the poor organisational skills of most children with ADHD. This may lead to their neglecting to bring the correct equipment and/or books to school; not being able to organise their desks; achieving poor academic results (especially in mathematics); and struggling with comprehension of tasks and commands (Picton, 1999:1).

Teachers who were asked to identify those behavioural and emotional difficulties of children with ADHD that are most severe and prevalent in their view, reported, among others, work avoidance, lack of concentration and difficulties in cooperating (Poulou & Norwich, 2000:183). The behaviours viewed as occurring most frequently were *lack of concentration, talking without permission, untidiness and fidgeting* (Poulou & Norwich, 2000:184). Lack of concentration was again mentioned when the teachers reported the most severe behaviours (Poulou & Norwich, 2000:184). These behaviours often interfere in the teaching process and

it is clear that especially a lack of concentration amongst learners is of great concern to teachers.

Another aspect intertwined with school life is that of socializing with peers.  The symptoms accompanying ADHD, such as hyperactivity, impulsivity and/or inattentiveness, may make it difficult for children with ADHD to establish friendships.  Even if they do manage to make friends, the symptoms may complicate maintaining these friendships. They are often regarded as unpopular among their class members (Lerner, 2000:235-236).

It is evident from the preceding discussion that the symptoms of ADHD have an impact on each individual who has relations with the child with ADHD.  Systems however are not only influenced individually, but they also influence each other reciprocally. The effect of the child's behaviour in one system may very well extend into some or all of the other systems. In the next section the (negative) influence of ADHD is illustrated by a graphic representation of the above discussion.  It is however a decontectualized representation and in order to understand the views of this study it should be compared with the conceptual framework discussed in section 2.6.

## 2.3     INTEGRATING THE SYSTEMS

In chapter 1 reference was made to Bronfenbrenners' model of systems theory.  The focus at this point should be placed on the meso system i.e. the system where all systems interact with one another.  From the previous section it can be concluded that stressors may be present in each system as a result of ADHD but, in interaction, the meso systems may also have a reciprocal effect on stress levels within the overall system.

Figure 2.1 (see p.31) indicates some of the stress factors present in the different systems:

- **Family**

As mentioned earlier, families (especially parents) feel tired and stressed and experience feelings of anger and resentment.

- **Peers**

Relationships between children with ADHD and their peers are often compromised, due to certain symptoms of ADHD – such as impulsivity in social settings, impulsive telling of lies, intense emotional reactions or overreacting and difficulties in delaying gratification (Sears & Thompson, 1998:20-31).  The occurrence of these symptoms in social settings may cause others to perceive the child with ADHD in a negative light, resulting in their complaining towards the teacher – who consequently may experience stress.

- **School**

It is the researchers belief that many teachers want their learners to perform well academically. The fact that children with ADHD are often not able to selectively direct their attention to the central task – resulting in their not understanding the work and not completing homework tasks – may add to the stress teachers experience. Such levels of stress may be elevated when teachers are confronted with complaints from other children. Teachers then, in turn, call on parents to intervene and the stress on parents can increase as a result.

This cycle contributes to all the different systems placing more stress on the child and in turn possibly exacerbating symptoms of ADHD.

**FIGURE 2.1:** **THE RECIPROCAL INFLUENCE OF THE SYSTEMS ON ONE ANOTHER AS ADAPTED FROM DONALD, LAZARUS & LOLWANA (2002:52), ACCORDING TO THE SYSTEMS CONTAINED IN THE AFORE-MENTIONED SECTIONS.**

**Error!**
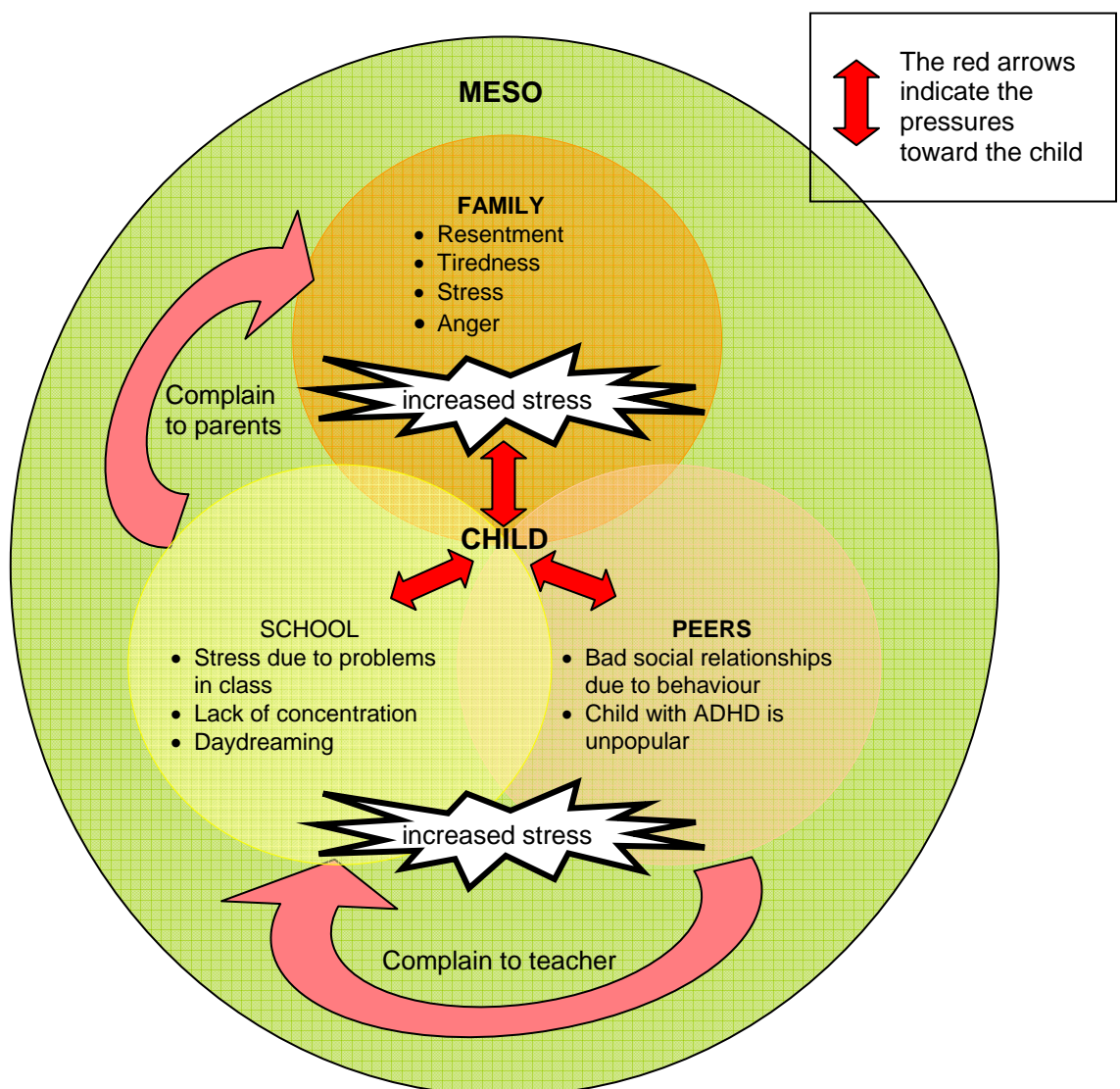
The influence across systems[21] is of significance in this study and could play a central role in determining the outcome, as it ought to reveal any possible reinforcement (of the principals of CCT) across systems. The relating symptoms of ADHD are not considered to be the sole defining characteristics of the child with ADHD but in order to understand the impact of ADHD, on all the systems, it has become necessary to include the description and influence thereof. I however agree with O'Neil (2006:1) when he reports in the Irish Times: *Labels are sins against children*. He continues to quote Dr Humphrey who is of the opinion that once a child is labelled, the search for answers and the exploration of options are often discontinued. This study supports the continuous search for optimal functioning and inclusive conceptualizations of children with ADHD within all systems. It aims to empower – and not to restrict. In the next section, assessment – which is one way of exploring treatment options – is discussed.

## 2.4    CHILDREN WITH ADHD AND ASSESSMENT

In assessing children with ADHD, many factors need to be taken into account and no single method of assessment should be regarded as sufficient for making a diagnosis. Psychological assessment to determine if a child has ADHD is necessary as it could provide evidence that the symptoms are in fact related to ADHD. It also offers the opportunity to determine which subtype of ADHD is present and further assists the medical practitioner in prescribing the correct medical treatment (Braaten & Felopulos, 2004:142-144).

Assessing a child with ADHD should start with a detailed prenatal history, as well as information on early development. An investigation into the history of the child could point out factors or genetics that may have had an effect on the development of the Central Nervous System (CNS) of the child (Sadock & Sadock, 2003:1224).

Apart from the valuable information gained from the child's prenatal history, direct observations within different settings (usually the school and at home) where a child is required to pay attention may also be included. The DSM-IV-TR requires that the diagnosis of ADHD include ineffective functioning in more than one setting. The child's school history and teacher's reports are needed to determine why difficulties are experienced at school, as well as how different aspects of the child's learning may further complicate development. These complicating factors may be determined by looking at how the child relates to different groups of people (peers or adults) as well as how she performs in structured versus free

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[21]    The reciprocal flow of influences in the subsystems will be discussed in the conceptual framework found at the end of this chapter.

activities. Observations from parents with regard to the child's reactions towards them and the siblings are also taken into consideration (Sadock & Sadock, 2003:1224-1225).

Once the prenatal history and observations can be integrated, a holistic view of the presenting symptoms often becomes apparent. The next step will then be to exclude behaviour that may appear similar to ADHD, but are in fact very different, such as: normal preschool activity levels, intellectual disability, hearing impairment, specific learning disabilities, Autism – Asperger Syndrome, Epilepsy, Depression, brain injury and/or, family dysfunction (Green, 1997:62-64).

Standardised measures could also be implemented. Parents and teachers could be requested to complete questionnaires and checklists that usually contain statements pertaining to ADHD. After completion a score can be obtained: the higher the score, the greater the possibility that the child indeed has ADHD (Green, 1997:65). For the purpose of this study, the parent as well as the teacher will complete the Copeland Symptoms Checklist[22].

When children are referred to a psychologist for assessment, it is most likely that an intelligence test or a test of cognitive ability and academic achievement will be implemented. (Braaten & Felopulos, 2004:145; Green, 1997:66-67). The afore-mentioned will rule out the possibility of low intellectual ability being the cause of behavioural problems (Braaten & Felopulos, 2004:145; Green, 1997:66-67). It will also give a preliminary indication of the presence of ADHD, as most children with ADHD will often *produce a characteristic pattern of subscores* on an intelligence test (Green, 1997:66-67). As part of the assessment battery, it is advisable that *specialised assessments in reading, writing, spelling, mathematics and language* are also included (Green, 1997:66-67).

For the purpose of this study, the Copeland Symptoms Checklist and CCB[23] – which measures, among other things, a child's sensitivity towards internal and external distractions – forms an integral part of the assessment. The Copeland Symptoms Checklist provides the opportunity to measure whether there was any difference in the presenting symptoms before and after implementation of the game. The CCB will give an indication of which programme(s) of CCT needs to be facilitated in order to rehabilitate the cognitive structures needed in order to function and adapt effectively to everyday life. Programme 3 – *find the shapes* – will form the cornerstone of this study because these are the principles that the board game is based on.

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[22] The Copeland Symptoms Checklist will be discussed in section 2.3.1.
[23] The CCB will be discussed in detail in section 2.3.2.

### 2.4.1 THE COPELAND SYMPTOMS CHECKLIST[24]

Questionnaires, like the Copeland Symptoms Checklist, are designed to score specific ADHD behaviours and the higher the child's score, the greater the chances that ADHD is present. Parents and teachers can complete these questionnaires (Green, 1997:65).

The Copeland Symptoms Checklist contains ten categories of symptoms:
- Inattention/Distractibility
- Impulsivity
- Activity level problems
    - Overactivity/Hyperactivity
    - Underactivity
- Non-compliance
- Attention-getting behaviour
- Immaturity
- Poor achievement
- Emotional difficulties
- Poor peer relations
- Family interaction problems (Copeland, 1987-2000:1-2).

These categories each contain a number of statements that the parent or teacher then scores: Not at all; just a little; pretty much; very much (Copeland, 1987-2000:1-2). This could provide a semi-objective input in the assessment and also aid in determining the effect of therapy (Green, 1997:65).

### 2.4.2 AN INTRODUCTION TO THE CCB

The CCB is a psychometric test that is intended for children and adolescents, ages three through to 16 (the last test, namely the Leveling-Sharpening-House Test, can be used with adult populations) (Santostefano, 1988:3). It was standardized using a group of children from age four through 12 years varying in ethnicity, socio-economic levels and geographic locations. The children used in the standardization procedure were all well-adjusted and from various public schools in the United States (Santostefano, 1988:31).

Even though the CCB was standardized in a foreign country, it is applicable for the South African context: certain issues which are of concern have been addressed, namely language, words, context and examples (Kanjee, 2001:87). With regard to language, the CCB was

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[24] An example of the Copeland Symptoms Checklist can be found in Appendix A.

standardized in English – which is also the home language and language of education of the participants. In the CCB the words (colours and fruits, which are the same in South Africa) and the context and examples used (i.e. colours of fruits) are universal.

The CCB was designed to measure and evaluate three cognitive functions namely, *scanning, attending selectively and comparing images of past information with present perceptions* (Santostefano, 1988:1). The cognitive functions are measured by means of three different subtests:

- ✎ The Scattered Scanning subtest measures the manner in which a field of information is scanned – narrow or broad (Santostefano, 1988:2).
- ✎ The Fruit Distraction subtest measures selective attention (Santostefano, 1988:3).
- ✎ The Level-Sharpening House subtest measures the comparison of images of past information with present perceptions (Santostefano, 1988:3).

The above-mentioned cognitive functions play an important role in learning and if they are dysfunctional, the result could be difficulties to adapt – and even learning problems (Davel, 1995:92). In such an instance the three tests will be used as a battery. The tests can also be used individually for specific clinical or research purposes (Santostefano, 1988:3). The cognitive function relevant to this study is selective attention and the focus will thus be on the fruit distraction subtest as an individual test. This test assesses the way in which a child selectively directs attention when faced *with a stimulus field containing information that is relevant or irrelevant to the task at hand* (Santostefano, 1988:49).

In order for children to engage in the Fruit Distraction Test (FDT), they need to be competent in naming the primary colours (blue, red, yellow and green). Prerequisites for taking the FDT would be the ability to identify a picture of an apple, a banana, grapes and lettuce. In addition they should be aware of the usual colour of both the fruits and the vegetable (Santostefano, 1988:3).

The test consists of four cards that are presented to a child only after a practice example was correctly completed (except for card three where no practice examples are given). The practice examples ensure that the abovementioned skills are in place. Each card contains 50 coloured rectangles or pictures of the fruit and the vegetable (in colours blue, red, yellow or green) that are arranged in random order. This order is however similar for each of the four cards. The child is then asked to name the colours of the pictures on the card as quickly as possible (Santostefano, 1988:3).

i.    ***Card one:*** The card contains 50 rectangles in the colours blue, red, yellow and green.

ii.   ***Card two:*** The pictures are yellow bananas, red apples, blue grapes and green lettuce.

iii.  ***Card three:*** The pictures are also yellow bananas, red apples, blue grapes and green lettuce, exactly the same as those of card two. The distinguishing feature is the achromatic line drawings of various common objects that are placed in between the fruit. These drawings are considered intrusive information that is irrelevant to the central task. The child is asked to try to ignore these distracting stimuli and is then asked to pay attention only to the colours and to name them *as rapidly as possible* (Santostefano, 1988:3).

iv.   ***Card four:*** The same pictures as in card two and three are presented. The difference being that they are coloured incorrectly. An apple may thus be green, yellow or blue but not red. The child should then name the colours that should be there as fast as possible (Santostefano, 1988:3).

Apart from the fact that the FDT assesses the cognitive function selective attention, each card measures the specific type of distraction the child is sensitive to. The peripheral pictures found on card 3 serve as external distractions and measures the child's sensitivity towards it. Card 4 measures sensitivity towards internal distractions through the contradictory colours on it (Santostefano, 1998:58).

Assessing ADHD is a process that needs to take many factors into consideration if optimal benefit is to be reaped. It should be seen as the first step towards treatment or intervention as it will most likely create an opportunity to introduce aspects of the intervention and familiarise and sensitise the child towards it. The results will give a good indication of the best treatment option or intervention strategy, which in this study will be CCT.

## 2.5    ADHD AND INTERVENTION

In chapter 1 mention was made of a multi-disciplinary approach – including a combination of medication, behaviour intervention and sometimes skills training – that currently appears to be most effective in dealing with children with an attention problem (Goldstein & Goldstein, 1998:443). This study will however focus on CCT as behaviour intervention strategy, as some parents may feel uncomfortable giving their child prescription drugs on a continuous

basis (Sears & Thompson, 1998:247). The researcher envisages that the implementation of the board game may however provide the opportunity to examine the possibilities and options with regard to medication use with the parents, while also empowering them in other areas of the intervention process.

### 2.5.1  COGNITIVE CONTROL THERAPY (CCT)

#### 2.5.1.1  What is Cognitive Control Therapy

CCT is an intervention strategy developed by Sebastiano Santostefano, the same person who developed the CCB. The CCB and CCT were not intended to be used in isolation, but rather to complement each other. The results obtained from the CCB acts as an indicator for the different CCT programmes, which need to be implemented.

CCT as a therapeutic intervention is made up of five different programmes, each of which aims to rehabilitate dysfunctional cognitive structures that a child needs in order to withhold and direct attention selectively (Santostefano, 1995:5).

> *To accomplish this, CCT asks a child to deal with a series of structured cognitive tasks which, in a stepwise fashion, attempt to improve the way in which a particular cognitive function copies information, then considers that information from different points of view, and then participates in transforming (i.e., pretending the information is something else)* (Santostefano, 1995:5).

CCT is an intensive programme that is practical and offers much opportunity for children to acquire skills they can apply to everyday life. This study focuses on attention problems; therefore the programme of interest is "Find the shapes", which will be discussed next.

#### 2.5.1.2  CCT relevant to the study – "Find the shapes"

*Find the shapes* makes up programme 3 of CCT and it is concerned with the rehabilitation of the cognitive control "Field articulation". It *defines the manner in which a child scans, articulates, and responds to a field of information in terms of what is relevant and irrelevant for the task at hand* (Santostefano, 1995:128).

The goal of "Find the shapes" is to help the child develop the ability to distinguish relevant from irrelevant information and withhold attention selectively from irrelevant information. The information the child is confronted with during the therapeutic situation is presented in

concrete (as it is) format, and also in abstract (symbols or fantasies) format (Santostefano, 1995:129).

In this programme a field of information is created by using different pieces.  These pieces to be used in the therapy sessions as part of the research will include shapes (squares, circles, triangles and rectangles) either in blue, yellow or red.  The therapist instructs the child as to which pieces of information are relevant to each specific task.  The child reacts by either locating the relevant pieces within the field or removing irrelevant information from the field. There are seven steps (see table 2.2), each made up of a series of progressively more difficult tasks (Santostefano, 1995:129).

**TABLE 2.2:     THE STEPS OF THE PROGRAMME "FIND THE SHAPES"**

| Step 1 | Geometric Shapes |
|---|---|
| *Part A* | Complexity of the field of information changes: |
| | 1.  From few shapes to many shapes.<br>2.  From shapes of one colour to shapes of many colours.<br>3.  From shapes located close to one another to shapes placed far apart on the table.<br>4.  From one type of shape to many types of shapes (thick and thin).<br>5.  From one size to many sizes.<br>6.  From single colours to patterns.<br>7.  From an orderly display to an unstructured display (heap of shapes from which the child should identify a particular shape) |
| *Part B* | Increased complexity of dimensions that define the information as either relevant or irrelevant.<br>1.  From one to many dimensions defining information as relevant/irrelevant, increased by therapist. |
| *Part C* | Delay engaging in tasks with relevant information.<br>1.  From little delay to much delay.<br>2.  From simple to complex tasks. |
| *Part D* | Child and therapist evaluate behaviour. |
| Step 2 | More complex information (buttons, paper clips).<br>Parts A – D Same as step 1 |
| Step 3 | Simple and complex information (other objects, such as puzzle pieces, pictures, playing music, tape recordings of noise).<br>Parts A – D Same as step 1 |
| Step 4 | Information that can elicit fantasy and emotion is now introduced.<br>Parts A – D Same as step 1 |
| Step 5 | Information is now associated with other objects, for example, geometric shapes (red squares) are imagined to be guns or cars, or yellow circles are imagined to be flowers. |

| | Parts A – D Same as step 1. |
|---|---|
| | Part E *Child and therapist evaluate whether symbols constructed are conventional or personal and the degree to which they fit attributes of stimuli* (Santostefano, 1995:130). |
| **Step 6** | The therapist initiates role-play and child and therapist evaluates (use animal puppets). The therapist utilises some of the fantasies the child used in the previous steps. |
| | Parts A – E Same as step 5 |
| **Step 7** | The child initiates role-play and transfers to the classroom. The therapist should actively encourage real-life situations. *No restrictions are imposed on the complexity of fields of information or the dimensions defining information as relevant/irrelevant* (Santostefano, 1995:130). |
| Adapted from Santostefano (1995:130); Eloff (1997:21-22) | |

These steps as well as the content of programme three will be adapted in such a way that it can be incorporated in a board game, which should be user-friendly and enjoyable to the family members who will implement it.

## 2.6    PARENTAL INVOLVEMENT IN AND BEYOND THERAPY

### 2.6.1    PARENT GUIDANCE

The earliest reference to parent guidance can be found in the beginning of the 19th century when groups were formed for mothers to address issues relating to the problems and practices of child rearing (Oberschneider, 2002:185). However, parents were only considered as part of the therapeutic process with the introduction of psychoanalysis by therapists like Anna Freud (Oberschneider, 2002:185).  It was only much later that parents' role in therapy became more active in the sense that they were the ones who supplied information about their children to the therapist, while the therapist gave them advice about handling their children (Witmer, 1946:11).

The 1930's and 1940's brought about another change in the way parent guidance was applied.  This time it was believed that the child in therapy could only truly be helped if the *unconscious conflicts* of the parents were explored and understood.  In this sense parents were seen as patients (Oberschneider, 2002:185).  However, during the 1940's the focus shifted from *parents as patients to parents as partners*.  This new focus was characterized by a supportive relationship between therapist and parent and as a result more support was gained from parents toward their child's treatment.  This supportive approach continued into the 1980's (Oberschneider, 2002:185).

Siskend (1997:14) placed the emphasis of parent guidance on the interpretation of transference, (ambiguous feelings experienced by parents toward the therapist).    For

example the parents may view the therapist as their child's saviour while being faced with their own limitations concerning their children (Siskend, 1997:14). On the topic of transference Siskend (1997) writes:

> *Both the acting out of parents and the therapist's countertransference are burdens when resisted. When they are acknowledged and accepted by the therapist, when they are pursued and explored with curiosity and energy, these unconscious dialogues become valuable sources of insight and serve us well* (Siskend, 1997:14).

Transference and countertransference are encountered in the psychodynamic approach – which forms part of the theory on which CCT is founded. The viewpoint of this approach is that a person's mind has both unconscious processes and conscious awareness. These are often conflicting and the meaning a person assigns to events or experiences is influenced by them (Santostefano, 1995:xviii). This theory allows the therapist to examine the unconscious meanings or influences that directs a child's behaviour (thus therapists acknowledge, accept and use the unconscious dialogues to the benefit of the child and of the therapeutic intervention). This is done in the second phase of CCT, where fantasy and role play are introduced (Santostefano, 1995:xxiii).

In his conclusion Oberschneider (2002:204) refers to the use of a combination of the supportive approach and the exploration of transference. He refers specifically to those times when *parents' emotional difficulties have likely contributed to or continue to exacerbate the child's emotional difficulties* (Oberschneider, 2002:204). To achieve this combination an alliance with the parents should be formed from the start by *listening, supporting and preparing the parent or parents for the work ahead* (Oberschneider, 2002:202) and by making an effort to let *parents feel understood, cared about, validated, and empowered* (McGuire & McGuire, 2001:2). It is important to remember that the goal for the use of transference is to facilitate improvement in parenting as well as in the behaviour of the child by creating opportunities for parents to gain awareness of unconscious factors that may have a negative influence – at the same time CCT introduces these meanings to the child's awareness. As a result the child can be empowered to gain control over them (Santostefano, 1995:xviii). The child however remains the patient – problems of parents are only explored if these have a relation to the child's problem (Oberschneider, 2002:202-203).

In this study the board game will serve as a link between therapist, parent and child. The parent will be given the opportunity to take on different roles, one of these being co-therapist in reinforcing the principles of CCT in the home environment. The possibility exists that the board game will afford parents the opportunity to explore their own emotional responses with relation to their children's symptoms of ADHD. The therapist will support the parents in their

exploration process because they should understand and address their own emotions regarding ADHD in order to enable them to fulfil their roles in the therapeutic process.

## 2.6.2　GAMES IN THERAPY

One of the strengths of games in the therapeutic context is that they can be used as a substitute for verbalisation (when children are too young to verbalise their emotions) or as fantasy expression  (Schaefer & Reid, 2001:1; Schaefer & Cangelosi, 2001:9-10; Wilson, Kendrick & Ryan, 1992:50-51).  When a child engages in play therapy, *playing a game can promote the emotional growth of children in direct and indirect ways* (Schaefer & Reid, 2001:11).  Another advantage of the process of playing a game is that it may enhance social skills, reality testing and mastery of anxiety, while at the same time offering enjoyment, relaxation and catharsis.  The therapeutic relationship may also be strengthened through the playing of a game.  Moreover a metaphorical stage may be generated, facilitating the expression and resolution of fear and conflict (Schaefer & Reid, 2001:11-12).  A great wealth of games is to be found within the play therapy context:

- ✺ *Puppets* (Kaduson & Schaefer, 2003:159; Schoeman & Van Der Merwe, 1996:132).
- ✺ *Storytelling* (Kaduson & Schaefer, 2003:178; Schaefer & Cangelosi, 2002:245).
- ✺ *Finger Painting in play therapy* (Schaefer & Cangelosi, 2002:205: Schoeman & Van Der Merwe, 1996:176).
- ✺ *Music Play therapy* (Schaefer & Cangelosi, 2002:303 Schoeman & Van Der Merwe, 1996:44).
- ✺ *Sand play* (Schaefer & Cangelosi, 2002:162; Kaduson & Schaefer, 2003:270; Schoeman & Van Der Merwe, 1996:176)
- ✺ *Ball Play* (Schaefer & Cangelosi, 2002:313; O'Conner, 1991:203).
- ✺ *Board games* (Bellinson, 2002:2; O'Conner, 1991:210-211).

Board games are referred to as structured, goal-orientated games, with specific rules of interaction dictating that there will be a winner (Bellinson, 2002:2; Schaefer & Reid, 2001:1-2). They allow children to play out their problems, and possible solutions in a *non-threatening age-appropriate environment* (Bellinson, 2002:30) while attempting to *relate the treatment to the child's real life* (Bellinson, 2002:30).  It would appear that children who have reached the developmental stage where they can, to a large extent distinguish fantasy from reality, might prefer to play board games in therapeutic sessions (Bellinson, 2002:3; O'Connor, 1991:207). O'Connor (1991:207) is of the opinion that board games are of little interpretational value to the therapist.  However, the researcher does not share this view and prefers to align herself with the views of Bellinson (2002:3), who argues that board games are developmentally

appropriate for children in the middle childhood phase. It should thus be expected and even encouraged that they be used. The fact that the board game aims to create a fun intervention and may be enjoyed within the family context, serves to strengthen the researcher's view in this regard.

The board game used in this study will aim to accomplish all the afore-mentioned by:
- incorporating clear instructions and rules[25] that will guide interaction;
- allowing children to become aware of their attention problems in a playful environment, while at the same time acquiring skills (cognitive control) to apply in everyday life (when required to direct attention selectively to a task at hand).

Of all the games mentioned here, a board game served the rationale and focus of the study best. The researcher furthermore felt comfortable using a board game for involving the family in therapy, but, more importantly, to extend therapy to their home environment. Board games also appear to be the most age appropriate play therapy intervention considering that ADHD – Predominantly Inattentive Type – is often only diagnosed during the middle childhood phase. The impact of this game, however, does not only depend on its suitability for the child, but depends equally on the co-operation of the parents. The role of parents with regard to the board game will now be reviewed.

### 2.6.3    THE ROLE OF PARENTS WITH REGARD TO THE BOARD GAME

When parents make the decision to take their child for therapy, the emotions they will most likely experience can be compared to those felt when they first took their child to pre-school or to their first day in grade one (McGuire & McGuire, 2001:1). Parents in this vulnerable situation need some comfort and reassurance. It is thus advisable that the therapist aims to create a positive environment in which the parents feel they can trust the therapist and that the therapist acknowledges the important role they play in their child's life and in the therapeutic process (McGuire & McGuire, 2001:1-2). This can be realised by establishing a collaborative relationship with the parents.

When such a relationship is considered in therapy, a few aspects needs to be kept in mind, especially when working with the family of a child who has attention difficulties. It is important to realise and respect that every family is a unique system. Ideally families should be empowered with knowledge in such a way that it is practical and also understandable to them. Although families with children with ADHD are often very vulnerable to stress, it is vital to remember and acknowledge that they too have learned to cope with their difficult

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[25]    The instructions and rules of the game will be explained in chapter 3.

circumstances and thus can be regarded as the "experts" on their child's life (Lock, Marthur & Smith, 2003:1-2).

The use of the board game will be facilitated in a practical and understandable way and the parents will implement it at home.  Their involvement could lead to their being more motivated, which in turn could motivate their child. Involving parents in therapy may also increase the commitment from the parents' side, which could improve the overall success of the therapeutic intervention (McGuire & McGuire, 2001:10-11).

The therapeutic situation envisaged for this study entails that the mother should take on multiple roles, namely *consultant, collaborator or co-client* (Kendall & Choudhury, 2003:93). These roles will manifest in the following ways:

- **Consultant**

The mother will give information on the life and development of the child up until that point in time.  She will report back on the progress made at home after using the board game and she will link with the school, the therapist, the child and the family system.

- **Collaborators**

The mother will collaborate with the therapist by implementing the board game at home, thereby reinforcing those skills facilitated by the therapist during the formal therapeutic session.

- **Co-client**

The principles of therapy as well as the use of the board game will be facilitated to the mother, who will then implement them at home.  She may also need guidance and support in order to understand her child and her child's behaviour as well as the concepts of the therapeutic process.

Being part of this study places a tremendous responsibility on the mother's shoulders.  She needs to make time to implement the board game and to fulfil al the above-mentioned roles. The researcher will attempt to simplify the mother's role and make it more accessible by keeping an open channel of communication and encouraging her to ask questions at any time.  The researcher will also aim to give meaningful feedback on those questions or other concerns the mother may have.  The researcher will further attempt to enable the mother to be optimally prepared for her multiple roles in this study by facilitating issues pertaining to ADHD.

## 2.7 CONCEPTUAL FRAMEWORK

Figure 2.1 (see p. 31) showed a graphic representation of the negative influences of ADHD. The conceptual framework that guides this study also provides for the positive aspects that may form part of this study. Although still based upon the systems theory, the conceptual framework for this study consists largely of assumptions. This is illustrated in figure 2.2 (see p. 45).

The conceptual framework is largely based upon assumptions of the possible influence and outcomes of the intervention process. Firstly the assumption is that an improvement may become evident in each of the micro systems, which may be due to the inclusion of a fourth micro system, namely the intervention (incorporating all the principals of Santostefano's theory) that could have the following influence on the other Microsystems:

- **Family:**
  ↳ Empowered because of better understanding of their child
  ↳ Becomes aware of positive traits associated with ADHD.

- **School:**
  ↳ Notices better behaviour in class.
  ↳ Becomes aware of positive traits by talking to parent.

- **Peers:**
  ↳ Appreciate improvement in social skills and accept the child as a friend.

Another core assumption is that improved relationships between the different micro systems may become apparent in the meso system. This may be due to the individuals within systems having more understanding and empathy for the situation of individuals in other systems. It might emerge that systems become more understanding towards each other and work together as a team.

Lastly, but of cardinal importance, is the influence of the child on the other systems and vice versa. Firstly it its envisaged that the child (and the other systems) will discover and embrace the positive aspects associated with ADHD –creativity, energy, spontaneity and an ability to focus intently on the task chosen by themselves (Sears & Thompson, 1998:3).
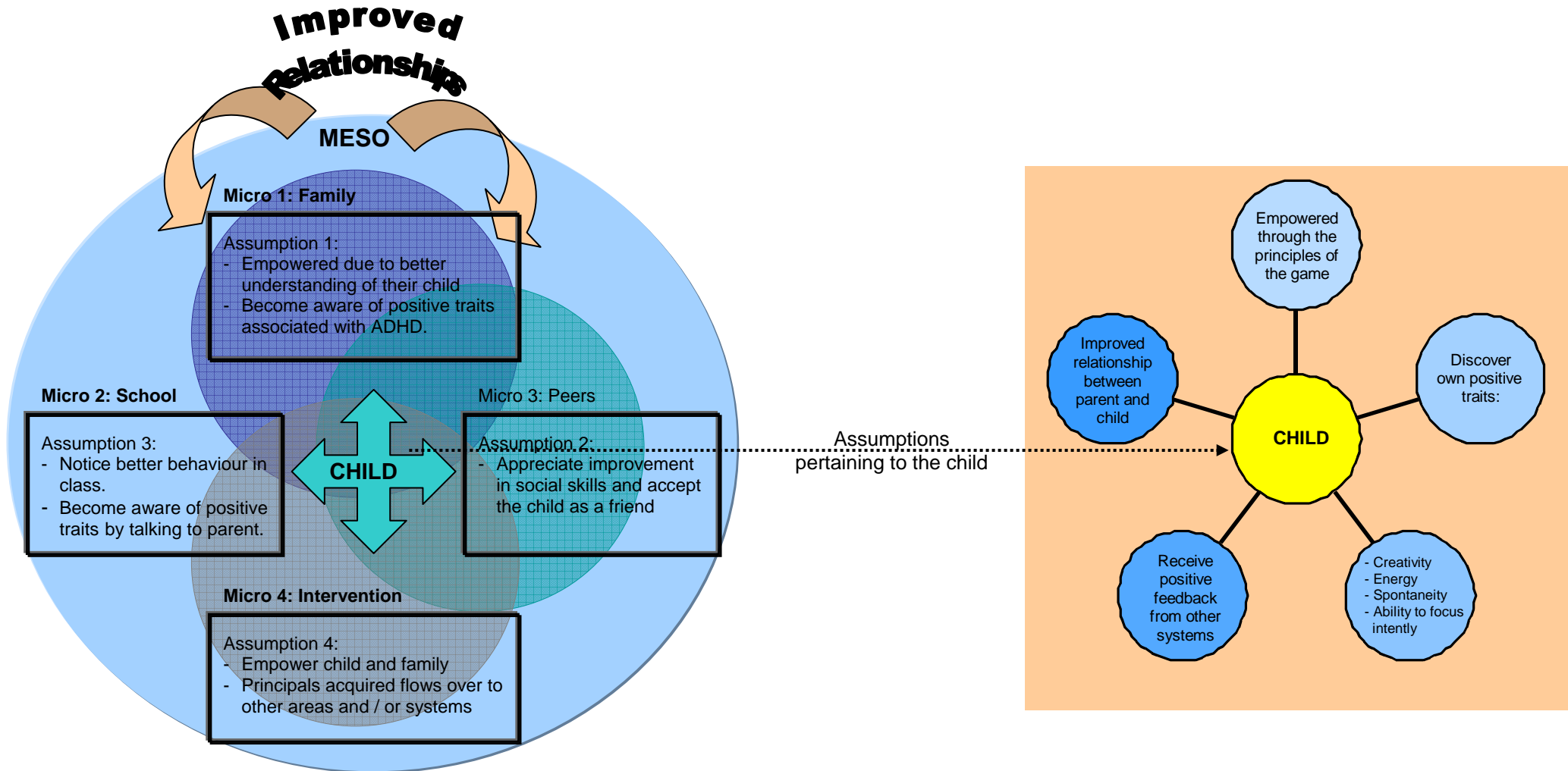
Furthermore, the following assumptions are made:

✍     Children will be empowered through the principles of the game.

✍     They will receive positive feedback from individuals in other systems.

✍     An improved relationship between parent and child could develop.

## 2.8     CONCLUSION

The aim of this chapter was to give the reader the opportunity to gain a greater understanding of the impact and effect of ADHD.  The ripple effect that ADHD has on every aspect of a child's life has brought to light the fact that ADHD permeates to complex reciprocal challenges between the different systems involved.  This reciprocity seems to exist by default and it is evident that ADHD has to be addressed on meso-level.  Probably the greatest influence of ADHD on the systems is the manner in which it forces the negative influences present in one system to flow over to and exacerbate the negative influences in other systems.  A vicious cycle emerges and this needs to be broken by involving all systems in the process of assessment and intervention with the goal of empowering them.  Intervention becomes far more than child-therapist interactions and rather takes on the form of co-operative facilitation, where the principles and skills applied in the therapeutic session are carried over to other role players in an attempt to motivate them to apply such principles and skills in their own system.  The result could then be the reciprocal strengthening of positive aspects and elimination of negative influences.

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## 3.1    INTRODUCTION

This chapter contains the guidelines and criteria that need to be taken into consideration during the design of a board game.  These are then related to this specific game.  A description of the contents of the board game, and the thinking behind its development are given.  An explanation of the rules of the game and the function of the different aspects of the game follows.  Chapter 3 will strive to equip the reader with all the knowledge needed to understand the use and working of the board game as well as its application possibilities.

Chapter 3 strives to equip the reader with the knowledge needed to understand the use and working of the board game as well as its application possibilities.

## 3.2    DEVELOPMENT OF THE BOARD GAME

During the course of my master's studies I used CCT as therapeutic intervention strategy with children who experienced attention difficulties.  I enjoyed using CCT because of its practical nature – its rationale made sense to me.  During my time spent with children with ADHD and using CCT, I noticed that there were times when the therapeutic process was interrupted and needed to be sustained outside therapeutic sessions. Children were sometimes not able to attend therapeutic sessions, which influenced the sustainability of existing therapeutic progress.  Often a child would show relapses in progress due to the afore-mentioned and this prompted me to think of a way to extend the therapy beyond the therapy room.  It became clear that it would be useful to involve the parents in the process.

This encouraged me to explore different possibilities, which will enable parents to reinforce the principles of CCT in the home environment.  Many hours went into reflecting on this, as our fast-paced life has created a culture where both parents work and time spent at home is precious and scarce.  The solution had to be something structured, yet fun, with realistic time limits, so that it would not take up too much time; place a burden on the family; or complicate family relations.  I came to the conclusion that this process would be best facilitated using a board game.

Finally the practical issues had to be considered and ways of incorporating the principles of CCT into a board game needed to take on shape.  Much moulding and shaping and many drafts, resulted in a board game with cards and components all based on the principles of either the CCB or on the CCT program "Field articulation – Find the shapes".

## 3.3    THE DESIGN OF THE BOARD GAME

I viewed the design and development of a board game as an ongoing process.  It is, in my opinion, a gradual evolution of ideas, which does not emerge overnight.  One of the biggest considerations in the design process of the game was that it had to cater for the needs of children with attention problems.  The practicality and user friendliness of each aspect of the game had to be measured against this fact.

Many resources are available to assist one in the process of game development.  Dodge (2003:1-5) outlines six steps that make up the process.  His research has proven to be very valuable in my quest to develop this board game and I will use his steps as basis to explain this section.

### 3.3.1    CONTENT ANALYSIS

Content analysis involves a process of brainstorming on the topic you have in mind for the game – either alone or, preferably, in a group.  Any and all ideas (as many ideas as possible) should be gathered and written down.  Selecting the ideas that have potential and eliminating those that may not work will be done later (Dodge, 2003:1).

The brainstorming phase of the developmental process was done, involving the following people:

✥    My supervisors:  Both of them have extensive knowledge of CCT and they could contribute by taking into consideration the principles of CCT as well as the therapeutic context that the board game intends to mimic.

✥    An educator:  She has many years experience working with children and has a wealth of knowledge on activities that children enjoy and on elements, which could possibly enhance a board game.

✥    A production manager:  His field of expertise is in creating processes for manufacturing.  He could contribute creative ideas about practical aspects that could add to the applicability of the game.

The following ideas emerged during the brainstorming phase[26]:

↳ Incorporating the shapes used in CCT.

↳ Using generic concepts most children can relate to (e.g. ice-cream).

↳ Having a start and a finish.

↳ Using "punishment" – if you land on a certain block, or if you do/answer something incorrectly, you have to be punished.

↳ As punishment use a specific block like the jail in Monopoly(R) ®[27].

↳ Use "reward-blocks" together with punishment, for example: Dream Land, Never-Do-It-Again-Boat, Sorry City.

↳ Add blocks that force you to skip a turn.

↳ Use a points system where each player has an empty board that has to be filled with objects. The player whose board is filled first, wins.

↳ Design the blocks in such a way that each block represents a different object and once you land on that block and do something correctly, you collect an object. Once you have collected one of each object, you win.

↳ Incorporate aspects that appeal to children, such as rainbows and smiley faces.

↳ Use animals or insects that both boys and girls can relate to.

↳ Use primary colours, as they can be used for boys and girls.

↳ Incorporate concrete as well as abstract elements.

↳ The game should be played by two players.

↳ The game should be played by more than two players.

↳ Use pawns to move along with.

↳ A command should be completed correctly in three different ways before the player can move on. Once the player makes a mistake, the other player gets a chance to play.

↳ The use of shapes should become more and more difficult.

↳ Use cards that indicate which shapes should be used rather than using all the shapes in every move.

↳ The shapes can form part of the board, can be stored on the board and removed as needed.

↳ Use different blocks to indicate what shapes must be used during a turn.

At the end of the analysis phase I found myself being faced with a whole list of seemingly unrelated possibilities; yet most of them appeared very promising. At this point, however, it

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[26] These ideas that emerged from the brainstorming session and not all of the ideas reflect the opinion of this study, as external individuals were also involved. It may thus occur that some of these ideas are contradictory to the views and opinions of this study.

[27] This refers to the property trading board game developed by Metrotoy under license for John Waddington Ltd. London & Leeds and this reference will be applicable throughout the chapter when referring to the game Monopoly®.

became clear that a lot of thinking and planning would still have to go into the design process and the final product would be the result of numerous trials – of which the next phase marked the first step.

### 3.3.2 INCUBATION

During this phase the ideas generated previously are put aside for a period of time. Upon returning to the list, new ideas and connections emerged that were previously not noticed (Dodge, 2003:1). *One of the magical things about creativity is that your mind works on problems without you knowing it* (Dodge, 2003:1).

This step came naturally to me. Earlier, once the initial thinking had been done I had some trouble putting all the pieces together. I thought it a good idea to turn my thoughts away from the list for a while. When I picked it up again I found myself feeling excited to work on it again and two basic ideas started to take shape:

✎       Design the game in the form of **two boards** – one for each player, based on an ice-cream theme. Each player has to collect different ice-creams by completing certain commands and the player who collects them first wins.
✎       Design the dice to indicate what should be done during the players' turn.
✎       Design the game like a "**commercial board game**" (such as Monopoly® and Ludo®[28] etc).
✎       Use of blocks to move along on.
✎       Use cards containing those aspects that relate to a specific block.
✎       These blocks will determine what object you can collect if you complete it correctly.
✎       Incorporate the attention game: "BLUEREDGREEN".
✎       Incorporate the attention game: "stand; sit; clap your hands; smile".

### 3.3.3 CHUNKING

The list compiled in step one needed to be organised now: main categories are identified and the words from the list are then arranged according to these categories (Dodge, 2003:1). The categories identified by the author are:

- **Pieces**
Items or objects that may be used as markers to move around the board or to keep score with (Dodge, 2003:1).

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[28]    This refers to the board game developed by Selchow & Richter in 1874 and this reference will be applicable throughout the chapter when referring to the game Ludo®.

- **Patterns**

This category refers to combinations: combinations of content, which take on a different form or an additional meaning.

- **Paths**

In paths reference is made to progression of events (Dodge, 2003:1).

- **Probabilities**

Here the focus is on chance: does anything in the game happen by chance or beyond the control of the player (Dodge, 2003:1)?

- **Prizes**

What do the players strive for when playing the game (Dodge, 2003:1)?

- **Principles**

How does the content work?

In table 3.1 the process of chunking in this study will be discussed.

**TABLE 3.1:    CHUNKING**

| Pieces | - Using generic concepts most children can relate to (e.g. ice-cream).<br>- Incorporate aspects that appeal to children, such as rainbows and smiley faces.<br>- Use animals or insects that both boys and girls can relate to.<br>- Use pawns to move along with.<br>In developing the board game used in this study these elements evolved from ice-cream to bugs to fish. |
|---|---|
| Patterns | - Design the blocks in such a way that each one represents a different object. Once you land on that block and do something correctly, you collect an object.  Once you have collected one of each object, you win.<br>- Use cards that indicate which shapes should be used during a specific turn, rather than using all the shapes in every move.<br>- Use different blocks to indicate what shapes must be used during a turn.<br>- Design the game in the form of **two boards** – one for each player, based on an ice-cream theme.  Each player has to collect different ice-creams by completing certain commands and the player who collects them first, wins.<br>- Incorporate the attention game: "BLUEREDGREEN".<br>- Incorporate the attention game: *"stand; sit; clap your hands; smile"*.<br>- Using something children all relate to – ice-cream.<br>- Incorporate aspects that appeal to children, such as rainbows and smiley faces. |

| | |
|---|---|
| | •   Use animals or insects that both boys and girls can relate to.<br><br>In this study the principles of CCT need to be reinforced, thus being connected to certain aspects of the game. |
| **Paths** | •   The use of shapes should become more and more difficult.<br><br>In CCT, commands become progressively more difficult and paths need to be established in order to allow for this progression in the game as well. |
| **Probabilities** | •   Add blocks that force you to skip a turn.<br>•   Design the dice to indicate what should be done during the players' turn.<br>•   Use of blocks to move along on.<br>•   Use cards containing the aspects that relate to a specific block.<br>•   These blocks will determine what object you can collect if you complete it correctly.<br><br>In this board game focus and involvement are very important and chance should not play a role – other than perhaps rolling a dice. |
| **Prizes** | •   Using "punishment" – if you land on a certain block, or if you do/answer something incorrectly, you have to be punished.<br>•   As punishment use a specific block like the jail in Monopoly®.<br>•   Use "reward-blocks" together with punishment, for example: *Dream Land, Never-Do-It-Again-Boat, Sorry City*.<br>•   Use a points system where each player has an empty board that has to be filled with objects.  The player whose board is filled first, wins.<br><br>This category speaks for itself and was probably – in my mind  – the most difficult category to develop.  Deciding upon a reward that will not shift the focus of the game or complicate the game even further was very challenging.  The use of any form of punishment would also alter the principles of CCT (which state that punishment should not form part of the therapeutic process).  However, some form of reward did seem necessary to motivate children to keep playing.  A lot of elimination happened during this stage before an acceptable reward was decided upon. |
| **Principles** | •   Incorporating the shapes used in CCT.<br>•   Incorporate concrete as well as abstract elements.<br>•   Design the game in the form of **two boards** – one for each player, based on an ice-cream theme.<br>•   Having a start and a finish.<br>•   Use primary colours as they can be used for both boys and girls.<br>•   The game should be played by two players.<br>•   The game should be played by more than two players.<br>•   The shapes can form part of the board, can be stored on the board and removed as needed.<br>•   Design the game like a "**commercial board game**" (such as Monopoly® and Ludo® etc.).<br>•   Design the blocks in such a way that each block represents a different object.<br>•   A command should be completed correctly in three different ways before the player can move on.  Once the player makes a mistake, the other player gets a chance to play.<br>•   Use cards that indicate which shapes should be used during a specific turn, rather than using all the shapes in every move. |

| | • Incorporate the attention game: "BLUEREDGREEN". |
|---|---|
| | • Incorporate the attention game: *"stand; sit; clap your hands; smile".* |
| | This board game will be based on the principles of CCT and therefore elements of CCT were included here. |

### 3.3.4 ALIGNING

The content identified up until this point now needs to be examined in order to decide what should be taught by the game and which elements of the content can be aligned with the structure of the game (Dodge, 2003:2).

In this game the rehabilitation or acquisition of the cognitive control "Field articulation" needs to be facilitated. The focus of the game is also on the improvement of concentration.

TABLE 3.2: ALIGNMENT BETWEEN THE GAME (CARDS[29]) AND CONTENT (CCT)

| Bunny Cards[30] | CCT |
|---|---|
| Facilitate the acquisition of the cognitive control 'Field articulation' through the use of the names of colours (irrelevant) printed in a colour (relevant) different to that which it represents. | Aims to rehabilitate dysfunctional cognitive structures by developing *the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance* (Santostefano, 1995:129). |
| **Bear Cards** | **CCT** |
| Facilitate the acquisition of listening skills and of paying closer attention to a task at hand by asking a child to perform tasks that are simple at first but later incorporate some emotions. | Aims to promote the efficiency of field articulation functioning by transforming information through the use of fantasy or emotion (Santostefano, 1995:129,137). |
| **Butterfly Cards** | **CCT** |
| Facilitate the acquisition of the cognitive control "Field articulation" by making use of a deck of cards indicating specific shapes (differing in contours, colour, spatial relations and size) that are relevant to a particular turn in the game. | Facilitate the acquisition of the cognitive control "Field articulation" by making use of *complex organisations of contours, colours, spatial relations, and sizes to be surveyed* (Santostefano, 1995:129). |

Dodge (2003:2) cautions the designer to keep the following rules of congruence in mind during the aligning phase:

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[29] A detailed discussion of the cards can be found in section 3.6.3.
[30] Some confusion may arise when children refer to a bunny as a rabbit. The facilitator should discuss this with the child at the beginning of the game by highlighting that this game uses the word bunny.

*Whenever possible, the structures of the game should mirror the structures of the content;* and *The structures of the game should never contradict the structures of the content* (Dodge, 2003:2).

The structures of the board game should mirror that of a CCT session.  For this reason all elements included in the game tend to lend themselves to this mirroring and to not shifting the focus of the players.  All the structures encourage players to pay attention and they offer the opportunity for players to realise that paying attention (1) is possible, (2) is fun, and (3) pays off.

### 3.3.5   DRAFTING

During this step a rough prototype starts to take shape, being drawn on sheets of paper.  Any objects can be used as tokens or pawns allowing the game to be played.  What is critical to this step is reflecting upon possible thoughts of the players while they are playing the game (Dodge, 2003:3).

The first draft took on the form of two boards – one for each player, based on an ice-cream theme.  They were connected to each other to form one board.  A dice indicated to players what should be done during each turn.  Each player had to collect different ice-creams by completing certain commands and the player who collected them first would win.

Although this seemed like a good idea, I could not figure out a way of incorporating the commands in the game in such a way that the game would operate smoothly.  It felt as though the game did not operate as a unit, as all the commands were random or disconnected activities, which appeared to be forced into the game.  This did not serve the purpose, as the game used in this study should get the players focused on becoming aware of their own thoughts and focusing attention.  The game should form a tight unit allowing players to feel comfortable while enjoying the game.  On this note however it was time for the next step.

### 3.3.6   INCUBATION

During the final step of the initial process the subconscious has to do some work again while the draft prototype is put aside (Dodge, 2003:3-4).  After this a process of refining and improving follows playing the game with as many people as possible (Dodge, 2003:4).  During my own process of development I found this step to consume the most time and effort: the draft prototype from the previous phase had to change many times to

accommodate issues picked up while playing the game.  The issues I needed to address were those of designing the game to work as a unit and of incorporating all aspects in such a way that they would be easy to understand and the game would be fun to play.  All aspects of the game came under constant scrutiny and few things remained as set forth in the original draft.

Nevertheless this was one of the most exciting phases because I could see the original idea growing and being transformed into something with enormous potential.  Upon returning to the initial draft after the incubation period – and after consulting my chunking list again – a whole new idea and concept started to take shape.  A board game (such as Monopoly® and Ludo® etc) came to mind and I started to adapt my original draft to fit onto a board.  Where I had initially thought it would be impossible because there were too many aspects to be incorporated, I now realised that it would be possible after all:

✎        I used a rectangular board with spaces around the edges along which a pawn could be moved.
✎        Every block was fitted with an identifiable object (bunny, bear or butterfly).
✎        Decks of cards containing the same objects were used as a means of storing the content of the commands; they indicated what should be done during a specific turn.
✎        After much thought and 'trial-and-error', the cards were placed in numerical order and ranged from easy to more challenging levels, in order to provide the increased difficulty that characterises CCT.

During this step the "ice-cream" theme made way for an "animal" theme.  After drawing up a draft "ice-cream prototype", it ended up looking too feminine owing to all the pastel colours.  The animal theme, on the other hand allowed the use of primary colours that appeared more suitable for children of both genders.

The final product, after months of slowly progressing through the above steps, was a colourful board game that incorporated all the elements of CCT.  The content of this final product will now be discussed.

**FIGURE 3.1:** **A PHOTOGRAPH OF THE DRAFT PROTOTYPE OF THE BOARD GAME**
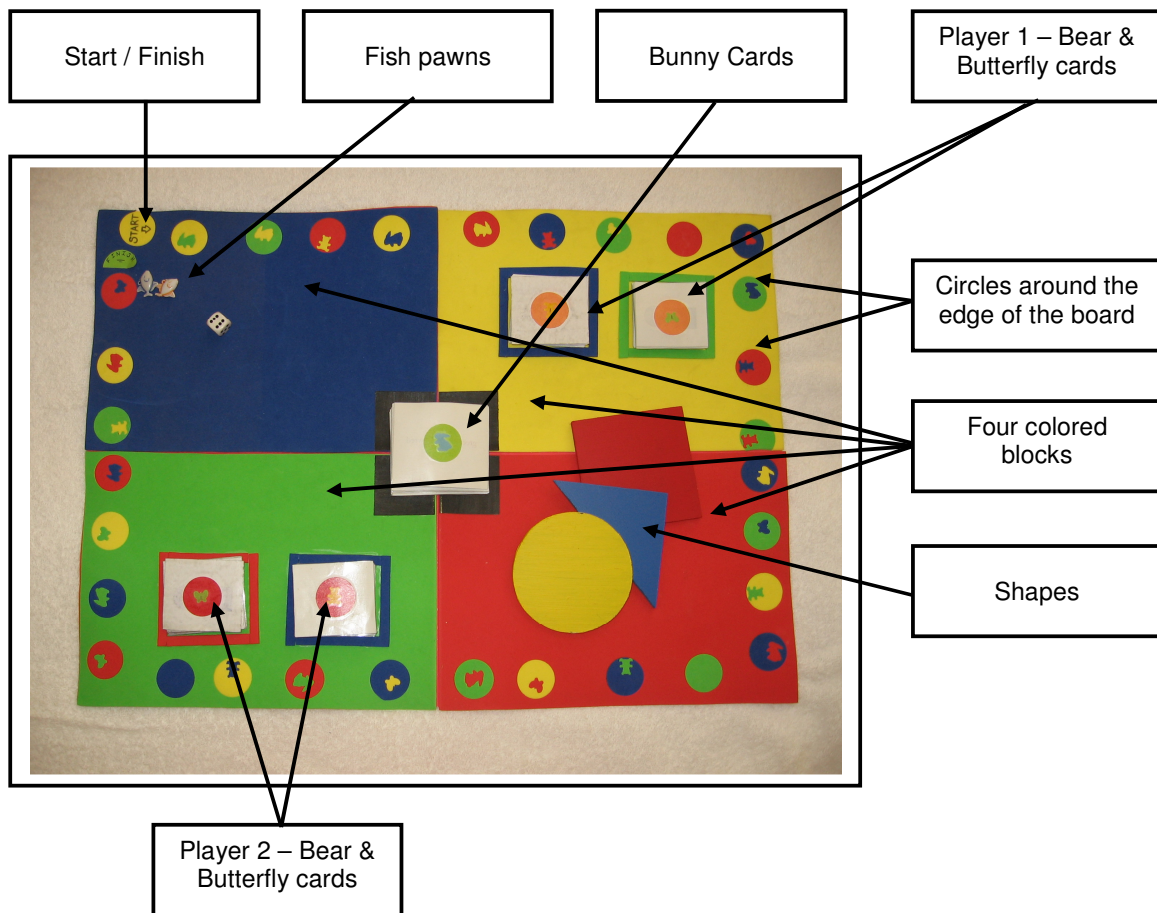


## 3.4 CONTENTS OF THE BOARD GAME

### 3.4.1 THE BOARD

In designing the board, my greatest concern was simplicity. The board should not contain too many distractions since it will mostly be used with children with ADHD. Developmentally it should appeal to children in the middle childhood phase, because of high prevalence rates of children with ADHD in this age group. It is also the age group where there is a high likelihood that children with ADHD will be in therapy[31].

I decided to keep the board rectangular in shape like most board games. It should not confuse the child by being too novel. The board is divided into four blocks, each being of a different colour: red, yellow, blue and green. I chose these colours because:

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[31] Compare section 1 in chapter 1 for statistics on the prevalence of ADHD.

✎      The same colours are also used in CCT, which helps to promote the mirroring of the therapeutic situation.

✎      Primary colours are usually accepted well by children and result in an inviting appearance.

✎      These colours are gender-friendly in that they do not necessarily appeal to only a specific gender, as may be the case with certain pastel colours.

Still continuing with the same colour scheme, circles were added along the edge of the board. Circles in the four colours mentioned above were placed around the edge of the board in random order. These are used to guide the movement of the game from start to finish and the number of circles a player will move along are determined by the score on a dice thrown. The board also indicates which deck of cards should be placed where, as can be seen in the following schematic representation:

**FIGURE 3.2:**     **A GRAPHIC REPRESENTATION OF THE BOARD**



Circles for moving on the board
Space for the "bear" and "butterfly" cards
Space for the deck of "bunny" cards
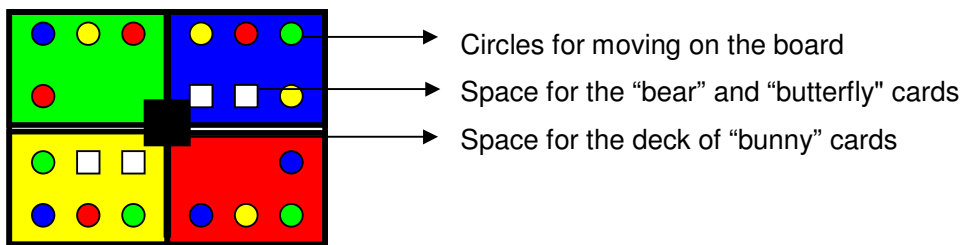
### 3.4.2     THREE DECKS OF CARDS[32]

The game includes three decks of cards, each covering different principles of CCT. The three decks are distinguished by being referred to as **"Bunny cards"**, **"Bear cards"** and **"Butterfly cards"**

The cards make up the core of the game as they:
✎      consist of the principles of CCT that needs to be reinforced;
✎      indicate what should happen during each turn; and
✎      simulate the therapeutic session because they also become progressively more difficult.

The inclusion of the cards in the game and deciding on an animals/insect theme as indicators for the different decks was a gradual process and changed many times. I finally decided on Bunny, Bear and Butterfly as each of these:

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[32]    The rationale behind every different type of card is discussed in section 3.6.3.

✧        start with the letter "B", which makes it easier to remember;

✧        represents an animal from different spheres of the animal (insect) kingdom (there should be at least one that every child can relate to).

This will hopefully aid in the fun and enjoyment of the game.

### 3.4.3    SHAPES

**FIGURE 3.3:     A GRAPHIC REPRESENTATION OF THE SHAPES USED IN THE BOARD GAME**
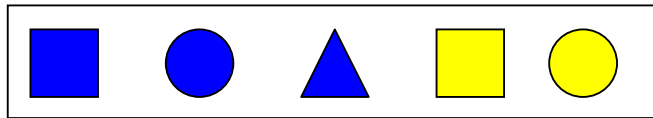


These shapes are used to build certain figures according to commands[33].   They are the same shapes and colours used in CCT and form the basis of CCT's programme 3[34], representing the main principles for rehabilitating the dysfunctional cognitive structures found in children with ADHD.

### 3.4.4    PAWN

As the theme of the board game is animals, I wanted to stick to that, yet the pawns needed to be clearly distinguishable from the other animals.  Fish represented a sphere of animals that had not yet been used, and I included one **Blue fish** and one **Orange fish**.

### 3.4.5    DICE

Because there is spaces around the board that need to be followed in order to reach the end, a need arose for some type of measure to guide the process.  A dice is a standard way of doing this (Sloper, 2002:3), so a dice was included, as it should be familiar to most children and will therefore be easy to use without complicating the game.  A few well-known games that make use of dice are: Monopoly®, Ludo®, Backgammon® and Trivial Pursuit®.  A dice should also add excitement to a game because you want to achieve higher scores than your opponent in order to reach the finish first.

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[33]    The use of the shapes will be discussed in section 3.6.3.3.
[34]    Compare chapter 2 section 2.4.1.2 for a discussion on the use of the shapes in CCT and table 2.2 for the steps in CCT.

**3.4.6    PLAYERS**

I decided to design the game for two players.  The reason is that two players may increase the mimicking value of the game because there are also two people present in a CCT session.  It may also add to the game being more focused.  The interaction between the two players will be much more intense than when many players take part.  This will enable the parent who plays with the child to monitor any progress much better.

**3.5    INSTRUCTIONS**

✎    All the players start at the beginning.

✎    The first player to reach the END is the winner. (See alternative ways to play the game).

✎    Each player receives two decks of cards ("Butterfly" and "Bear").  These are used to give commands to the **other player**.

✎    Each player gets a chance to throw the dice.

✎    The player who throws the highest score on the dice will start by moving the number of circles as indicated by the number of dots on the dice.

✎    The picture displayed on the circle on which the pawn lands indicates the type of card to be selected by player 2.

✎    If player 1 lands on either a "Butterfly", or on a "Bear" circle, player 2 gives the command.

✎    If a command is not executed correctly, another command of the same nature should be given, to a maximum of three commands per turn.

✎    If a command is correctly executed, player 2 will throw the dice and player 1 will give the instructions.

✎    Play continues until the first player reaches FINISH (or according to the rules of "Alternative ways to play the game").

**3.6    RULES OF THE BOARD GAME**

**3.6.1    THE BOARD**

✎    The yellow and the green blocks represent the areas in which each player will place his/her playing cards.  Before the game can commence, the two players will have to decide who will be playing from green and who will be playing from yellow.

�    The green and yellow blocks each contains two smaller blocks.  These blocks represent the designated spaces for placement of the decks of "Butterfly" and "Bear" cards.

�    In the middle of the board, a small black square can be found.  It represents the designated space for the "Bunny" cards.

�    The circles around the edge of the board represent the spaces on which the players will move their pawns.  Each circle contains a picture ("Bunny", "Bear", "Butterfly") that indicates the card to be used.

�    When a player lands on a blank circle he/she skips a turn.

### 3.6.2    THE CIRCLES AROUND THE EDGE OF THE BOARD

Each circle contains a picture ("Bunny", "Bear", or "Butterfly").  The picture on the circle indicates the type of card ("Bunny", "Bear", or "Butterfly") corresponding to the deck of command cards to be used during the particular turn when the player lands on that circle.

The pictures correspond with the following cards:

| | | |
|---|---|---|
| (Bunny) | - | Colour cards |
| (Bear) | - | Command cards |
| (Butterfly) | - | Shapes cards |
| (Blank) | - | No action, wait for your next turn. |

### 3.6.3    DESCRIPTION OF THE CARDS

### 3.6.3.1  Bunny cards

The Bunny cards facilitate the acquisition of the cognitive control "Field articulation" through the use of the names of colours (irrelevant) printed in a different colour (relevant).  The "Bunny" cards can be aligned with CCT[35] because CCT facilitates the process of paying selective attention to relevant information while ignoring irrelevant information (Santostefano, 1988:7).

The "Bunny" cards were adapted from an internet based game named *"Color Contest Child Game"* and is used to improve concentration (Joubert & Joubert, 2003-2004:1).  The website[36] allows parents, educators and children the opportunity to copy and use the games in their own situations.  The reason I chose to include this game is because:

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[35]    See section 3.3.4 and table 3.2 in this chapter.
[36]    The website address where the Color Contest Child Game and other similar games can be found is: http://www.educational-toy-guide.com/childgame.html

❧        it forces players to distinguish between relevant and irrelevant information;

❧        it is fun, yet very challenging; and

❧        it offers the opportunity to change it according to your needs and I was able to create many different cards based on this game.

**FIGURE 3.4:    A GRAPHIC REPRESENTATION OF THE BACK OF THE BUNNY CARDS**
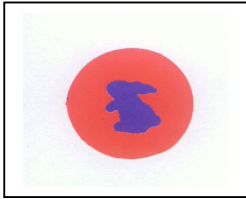


These cards contain the names of the colours red, blue, green and yellow written out.  Each colour name is printed in a colour that does not correspond with the colour name, for example:

<div align="center">**bluegreenyellowred**</div>

❧        These cards are placed in the centre of the board and are used by both players.

❧        When a player lands on a bunny circle, he/she must pick up a bunny card and proceed by calling out the colours and not the colour names printed on the card. The player should <u>not read the names of the colours printed</u> on the card.

❧        If the above-mentioned example is used, the player calls out the actual colours, i.e., "red, yellow, blue, green" and not the names of the colours.

### 3.6.3.2   Bear cards

The Bear cards, just like CCT, aims to facilitate the improvement of paying attention to a task at hand – as well as the acquisition of listening skills – by asking a child to perform a task that is simple at first but later incorporates some emotions.

These cards were derived from an activity found in a treatment book for ADHD.  I chose to include it in the game because it does not only facilitate selective attention (a child needs to attend to the other player when the command is read to be able to execute it), but it also aims to develop listening skills – one of the most important skills a child needs in order to adapt in the classroom situation (the child has to listen attentively to hear all the different commands crammed into one sentence).  The goal of these cards is to encourage the acquisition of listening skills in a fun way so that it may be more acceptable to the child with

ADHD (Dennison, 1990:330). The commands on these cards may help children to realise the benefits of maintaining attention to a task (Dennison, 1990:330).

**FIGURE 3.5:** **A GRAPHIC REPRESENTATION OF THE BACK OF THE BEAR CARDS**
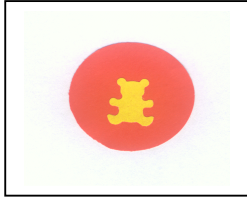


The commands found on these cards are in a specific order (numbered from 1 to 24) and progress from easy to more difficult. Examples are:

---

**Sit, stand, put up your right hand**

---

**Turn around, put up your left hand, sit, fold your legs,
smile, stick out your tongue**

---

If player 1 lands on a bear circle, player 2 has to pick up a bear card from his/her deck and read the command slowly to player 1. The commands on the card need to be read as a unit, and player 1 needs to memorise the commands as they are being read.

- ✎ After Player 2 has read the commands on the card, Player 1 has to execute the command.
- ✎ If player 1 executes the command correctly he/she can wait for their next turn.
- ✎ If player 1 executes the command incorrectly, player 2 should give another command of the same nature (to a maximum of three commands per turn).
- ✎ If player 1 cannot complete the command correctly after three attempts, the previous card must be repeated the next time player 1 lands on a bear circle.

### 3.6.3.3 Butterfly cards

The Butterfly cards contain the same shapes, in the same colours, as those used in CCT. Through the use of these shapes (differing in contours, colour, spatial relations and size), the cards aim to facilitate the acquisition of the cognitive control "Field articulation" (Santostefano, 1995:129).

As the shapes contain the main principle of CCT and serves an important role in mimicking the therapeutic situation at home, they are included in the game. These cards forms the direct link between parent and therapist, home and therapy room and it is here where most of the reinforcement and increased sustainability for CCT should occur – because it is such a true replica of what happens in therapeutic sessions.

**FIGURE 3.6:    A GRAPHIC REPRESENTATION OF THE BACK OF THE BUTTERFLY CARDS**
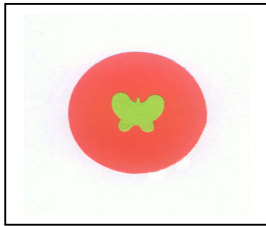


These cards consist of different shapes in different colours. Once more the cards are in a specific order (numbered 1-18) and progress from easy to more difficult sequences of shapes.

**FIGURE 3.7:    AN EXAMPLE OF THE SHAPES FOUND ON THE BUTTERFLY CARDS**
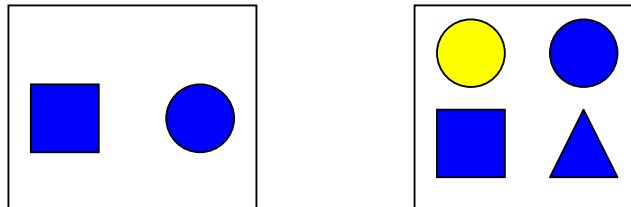


✢        When player 1 lands on a butterfly circle, player 2 picks up a butterfly card from his/her deck and gives a command using only the shapes showed on the card, for example: "Put the blue square on the blue circle."

✢        Player 1 then needs to execute the command using the shapes included in this game.

✢        If player 1 executes the command correctly he/she can wait for their next turn.

✢        If player 1 executes the command incorrectly, player 2 should give another command of the same nature (to a maximum of three commands per turn).

✢        If player one cannot complete the command correctly after three attempts, use the previous "butterfly" card the next time player 1 lands on a "butterfly" circle.

## 3.7 ALTERNATIVE WAYS TO PLAY THE GAME

✎ Instead of only playing one round at a time, the players can also determine beforehand that a certain number of rounds will be played and that the first player to finish the predetermined number of rounds will be the winner.

✎ Once the game has been mastered, the players can start to give "mirror feedback" to each other. Mirror feedback is where player 2 tells player 1 exactly how he/she has executed a specific task. An example of mirror feedback could be "I saw that you looked at me, then picked up the blue square, looked around and placed the blue square on top of the blue circle and then you smiled."

## 3.8 CRITICAL REFLECTION

After completing the prototype, I started to realise that all the effort that went into this game contributes a rather small percentage towards the success that will be experienced by using this game. I began to realise that the way in which this game is going to be introduced and, in a sense be "marketed", to the parents may play an equally important role. In the end it is the parents who will have to make time to incorporate this game into their schedules.

One of the aspects of the game that I am not yet satisfied with, is the pawns. I shall continue to search for something more applicable and which have more relevance to children in the middle childhood phase. Overall, however, I feel satisfied with the layout of the game. I experienced it as being user-friendly and enjoyable. I also accept that this game will in all probability never be "completed". New ideas and concepts will most probably continuously emerge and then be incorporated into the game in the quest for continuous improvement.

## 3.9 CONCLUSION

This chapter introduced the reader to the board game used in this study. It is clear from this chapter that the development of a board game is a complex task that requires patience and perseverance. It is an ongoing process that challenges developers to question every aspect of their own creation. Every part of a game should be significant and add value. It should also work together to form a tight unit that supports the goal of the game. The development of a board game is a fun, frustrating and exciting process, which probably teaches the developer as much as it hopes to teach those who will play it.

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## 4.1    INTRODUCTION

In this chapter the researcher describes the research process utilized to study how a board game was used as a parent guidance strategy to reinforce CCT in the home environment of the child with ADHD.  A discussion of the case study is provided followed by a description of the quantitative findings and qualitative insights which emerged.  An integration of both qualitative and quantitative data concludes this chapter.

## 4.2    RESEARCH PROCESS[37]

The research process and design were described in detail in chapter 1.  In order to provide the reader with a summary of this process a graphical representation follows:

### 4.2.1    NOTES ON THE QUALITATIVE DATA COLLECTION

- **Therapeutic sessions**

The data obtained from field notes made on a continuous basis during the therapeutic sessions was transcribed and provided a rich source of data.  A clear pattern of improvement was evident.  From this source of data however, it is not possible to determine whether the improvement was the result of a combination of CCT and the board game, or of one of the two.

- **Feedback from teachers**

Discussions with some of Mary's teachers were held after therapy was terminated.  Field notes were taken and transcribed, offering information on the impact of CCT and the board game in the school environment.

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[37]    Compare chapter 1 sections 6.2–6.4 for a detailed discussion of the research process.

```
                    ┌─────────────────────────┐
                    │     RESEARCH DESIGN     │
                    └─────────────────────────┘
                               │
                    ┌─────────────────────────┐
                    │       CASE STUDY        │
                    └─────────────────────────┘
                               │
                    ┌─────────────────────────┐
                    │  MIXED METHODS APPROACH │
                    └─────────────────────────┘
                               │
                    ┌─────────────────────────┐
                    │     DATA COLLECTION     │
                    └─────────────────────────┘
```

QUANTITATIVE DATA COLLECTION

QUALITATIVE DATA COLLECTION

PRE TEST

POST TEST

THERAPEUTIC PROCESS

INTERVIEW WITH MOTHER

FEEDBACK

- CCB
- Copeland Symptoms Checklist

- Observations
- Therapeutic notes
- Therapeutic progress

- From mother (parent guidance)
- School
- Therapeutic sessions
- Child

INTEGRATION OF QUANTITATIVE AND QUALITATIVE INSIGHTS

- **Feedback regarding the process of implementing the board game**

The feedback I received from the mother was very limited and it was often difficult to schedule an appointment with her.  She communicated her experiences of the process to me by means of two e-mails that consisted of one or two sentences.  The information contained in the messages was, however, insignificant and was thus not included in the data analysis.

- **Interview with the mother**

The interview with the mother was conducted after therapy had been terminated and appeared to be a significant source of information.  It assisted in determining how the process of implementing the game at home was experienced by the family and also what effect it had – in their opinion.  This interview was transcribed and qualitative insights derived from it.

### 4.2.2    DATA ANALYSIS

The qualitative data (gathered from the interview with the mother, field notes and observations of therapeutic sessions and of the intervention) was analysed according to Tesch's model (Tesch, 1990:154-155):

✍    The data analysis was initiated by carefully reading through the transcriptions of the interview and the therapeutic sessions to gain a holistic understanding.  Some ideas were written down – as they came up – during this step.

✍    Next the data was perused for purposes of identifying underlying meaning in the information.  The ideas that emerged were written in the margin.

✍    After reading through all the data a list was compiled containing all the qualitative insights[38].  Clusters were then formed from similar insights.

✍    The list was then compared to the data and qualitative insights were identified by highlighting the different sections in different colours and assigning a code to each cluster by using an abbreviation of the cluster name.

✍    The researcher aimed to reduce the total list of categories by grouping together qualitative insights that are related to each other, connecting similar insights with lines indicating interrelationships.

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[38]    Compare section 4.4.2 for a discussion of the qualitative insights.

**4.3     DISCUSSION OF THE CASE STUDY**

**4.3.1     BACKGROUND OF THE PARTICIPANTS**[39]

Mary was referred to the Training Facility of the Department of Educational Psychology (University of Pretoria) because her parents were concerned about her academic performance and they wanted to investigate the possibility that Mary had ADHD.

The participants are Mary, a nine-year-old girl, and her mother.  Mary is the youngest of two children (she has an older brother) who lives with her mother and father.  The family moved from Port Elizabeth to Pretoria in 2005.  Mary's brother did not move to Pretoria immediately and stayed with a relative in Port Elizabeth to finish his academic year.  He joined his family in 2006, the year the family embarked on the intervention process.  The parents reported that the relationship between Mary and her brother was challenging from time to time.

The family's mother tongue is English.  Mary attends a government school where she is in grade four and her mother is employed full-time by a government institution.  Mary is currently experiencing difficulties in school; she is not performing well academically and her relationships with her peers seem to be compromised due to the symptoms of ADHD.

**4.4     DISCUSSION OF RESULTS**

**4.4.1     QUANTITATIVE RESULTS**

**4.4.1.1  CCB - FDT**

In reporting the results of the CCT the percentiles (obtained together with the T-scores) of the participant are discussed based on the scoring and interpretation guidelines described later in this section[40].  An analysis of Mary's pre and post test is done by referring to the profiles derived from the assessments.

The T-scores for the FDT are interpreted in terms of six levels: severe (T-scores of 35 or lower, associated with the lowest 7% of the population); moderately severe (T-scores of between 36 and 40, percentiles of 8-16); and borderline dysfunctions (T-scores between 41 and 45, percentiles between 18 and 31); normal (T-scores between 46 and 55 – interpreted, in general, as age appropriate field articulation functioning); above average functioning (T-

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[39]   For documents supporting the facts mentioned here, see Appendix B.
[40]   Iso compare chapter 2 section 2.3.2 for a detailed discussion on the scoring and interpretation.

scores between 56 and 65, percentiles between 73 and 93); and hypermature dysfunction (T-scores 66 and above) (Santostefano, 1988:58).

**GRAPH 4.1:** **MARY'S PROFILE FOR THE CCB PRE TEST[41]. THIS PROFILE SHOWS THE TIME USED AND THE ERRORS MADE ON CARD 2[42] (COLUMNS ONE AND TWO) AS WELL AS CARD 3 (COLUMNS THREE AND FOUR) AND CARD 4 (COLUMNS FIVE AND SIX)**
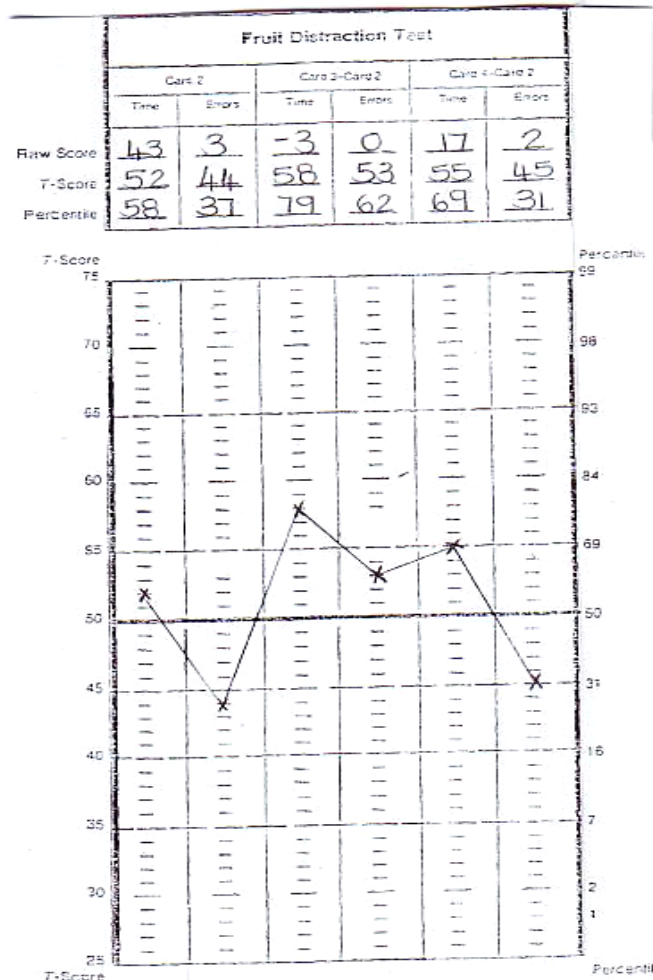


The profile of card 2 gives an indication that the speed with which Mary approaches new tasks is appropriate for a child of her age. The number of mistakes she makes when confronted with new tasks, however, falls in the borderline category and indicates that she makes more mistakes than the average child of her age when confronted with new tasks.

It is important to note that the scores of cards 3 and 4 should be interpreted by comparing them to the scores of card two, the baseline card as well as clinical data such as behaviour

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[41] The profile may be misleading as it is not presented here in conjunction with the qualitative data. It may thus give the indication that the severity of the symptoms is low while the qualitative data serves to emphasize the severity.

[42] Compare chapter 2 section 2.3.2 for a discussion of how each card is used and what it evaluates.

changes or peripheral recalls. The percentiles indicate that Mary was able to name the colours of card 3 in less time than that of card 2 (in other words at a faster rate) and she worked more accurately (in other words made fewer errors) than she did compared to the baseline card (card 2). The profile of an increased effort with regard to time and accuracy when confronted with external distractions together with the qualitative data (the three peripheral recalls and behaviour changes such as impulsivity, losing her place or skipping rows, shouting or using her finger to point while attempting card 3) indicated sensitivity toward external distractions and that she conversely experiences difficulties in withholding her attention selectively from external distractions.

During the pre test, card 4 indicated a slight upward movement with regard to time and errors. This may indicate sensitivity towards internal distractions. The interpretation of this profile is supported by the Copeland Symptoms Checklist, the interview with the mother and observations made by the different role players (researcher, mother and teacher).

**GRAPH 4.2:** **MARY'S PROFILE FOR THE CCB POST TEST. THIS PROFILE SHOWS THE TIME USED AND THE ERRORS MADE ON CARD 2 (COLUMNS ONE AND TWO) AS WELL AS CARD 3 (COLUMNS THREE AND FOUR) AND CARD 4 (COLUMNS FIVE AND SIX)**
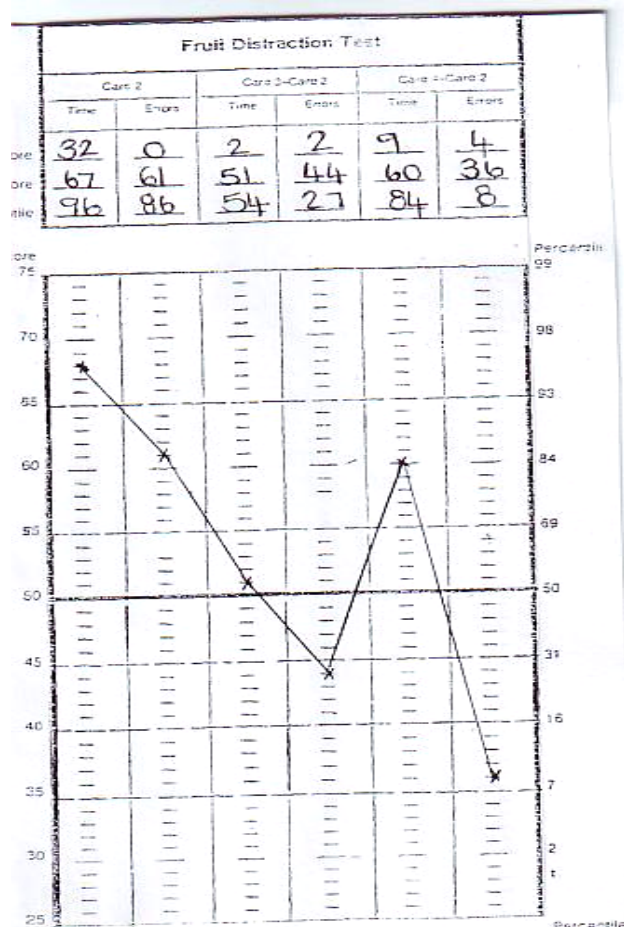
These scores indicate that Mary used less time and made fewer errors in the post test when confronted with a new task. It is, however, important to note that percentiles of 95> should be given special attention. Percentiles in the range of 95> indicate the highest degree of field articulation and may cause Mary to isolate her attention from distraction to an extreme degree that could be as maladaptive as an inability to selectively withhold attention from distractions (Santostefano, 1988:58). On the other hand, however, it may hold benefits for Mary in the school environment, as it will be beneficial if she pays proper attention when new work is done in class. It is important to keep in mind that even though there was a timeframe of more than six months separating the two tests, Mary had been exposed to the test previously and the changes in the profile may, to a certain degree, relate to this. Mary was furthermore sensitized to the challenges posed in the test through the therapeutic process and playing the board game as similar components are contained in it.

The percentiles from the post test indicate a significant drop in the profile, and even though the scores are found in the normal range, the difference between cards 2 and 3 indicates a possibility that a strong presence of sensitivity towards external distractions still exists. This possibility is supported by the fact that she recalled four peripheral figures which equals the cut-off score and is therefore viewed as significantly elevated (Santostefano, 1988:55). The fact that Mary had taken the test before – and had consequently seen the peripheral figures before – also needs to be kept in mind here.

During the post test Mary took longer to name the colours of card 4 in comparison to card 2, which indicates that sensitivity towards internal distractions may still be present. She also made more mistakes, as with the pre test, which serves to support the indication of internal distractibility.

The results from the CCB thus showed that an improvement is evident in the way Mary attends to new tasks. However, her ability to selectively direct attention to the task at hand – when confronted with both external and internal distractions – after the therapeutic intervention and the introduction of the board game in her home environment remains problematic. When comparing the profile of the pre test with that of the post test, deterioration becomes evident with regard to cards 3 and 4. On card 3 Mary took longer and made more mistakes in the post test than in the pre test – possibly indicating an increase in the severity of her sensitivity towards external distractions. Comparing the scores of the pre and post test of card 4 also reveals deterioration. Mary used less time to complete the card, yet made more errors in the post test. This may indicate the possibility that she is aware of her own sensitivity towards internal distractions and attempts to handle this by working faster – at the expense of accuracy. In the classroom environment this could have serious

implications for Mary's ability to focus on the work being taught and on her accuracy when completing her schoolwork. The deterioration may be an indicator for a multi-faceted treatment approach (such as medication, individual learning support and intervention in the school environment). However, the parents were, at the time of assessment, not comfortable with the inclusion of medication and wanted to implement other options first. It may also be that the time-span of the CCT intervention may have been lengthened in order for Mary to fully benefit. A CCB profile is after all only an indication of cognitive control functioning at a specific point in time.

### 4.4.1.2 Copeland Symptoms Checklist

The Copeland Symptoms Checklist was also used as a pre and a post test. Mary's mother and teacher completed it before and after therapy. Each section of the questionnaire carries a different weight as indicated on the checklist. To obtain scores for each section, a percentage is worked out by dividing the weight assigned by the person filling out the checklist, by the weight assigned to the specific section. These percentile scores will be used in discussing the results of the Copeland Symptoms Checklist and will be represented in tables 4.1 and 4.2, followed by a graphic representation in the form of a histogram.

**TABLE 4.1:**   SCORES FROM THE COPELAND SYMPTOMS CHECKLIST FOR THE PRE TEST AND POST TEST COMPLETED BY MARY'S MOTHER

|           | Inatt | Imp | Hyp | Und | Non | Att-g | Immat | P-ach | Emot | Peer | Fam |
|-----------|-------|-----|-----|-----|-----|-------|-------|-------|------|------|-----|
| **Pre test**  | 48%   | 47% | 39% | 33% | 33% | 11%   | 0%    | 48%   | 4.2% | 17%  | 50% |
| **Post test** | 47%   | 28% | 18% | 13% | 27% | 6%    | 8.3%  | 33%   | 4.2% | 11%  | 29% |

*Key for reading Table 4.1*

| **Inatt** | Inattention | **Immat** | Immaturity |
|-----------|-------------|-----------|------------|
| **Imp**   | Impulsivity | **P-ach** | Poor achievement |
| **Hyp**   | Hyperactivity | **Emot** | Emotional problems |
| **Und**   | Underactivity | **Peer** | Poor peer relations |
| **Non**   | Noncompliance | **Fam**  | Family interaction problems |
| **Att-g** | Attention-getting behaviour | | |

These scores indicate that the five greatest areas of improvement (see graph 4.3), as experienced by the mother after the implementation of the intervention programme, are:

| Hyperactivity | - | 21% improvement |
| Family interaction problems | - | 21% improvement |
| Underachievement | - | 20% improvement |
| Impulsivity | - | 19% improvement |
| Poor achievement | - | 15% improvement |

**GRAPH 4.3:    A GRAPHIC REPRESENTATION OF THE SCORES WHERE THE MOTHER EXPERIENCED THE GREATEST IMPROVEMENT BASED ON THE RESULTS OF THE COPELAND SYMPTOMS CHECKLIST**



| | Hyp | Fam | Und | Imp | P-ach |
|---|---|---|---|---|---|
| Pre Test | 39% | 50% | 33% | 47% | 48% |
| Post test | 18% | 29% | 13% | 28% | 33% |
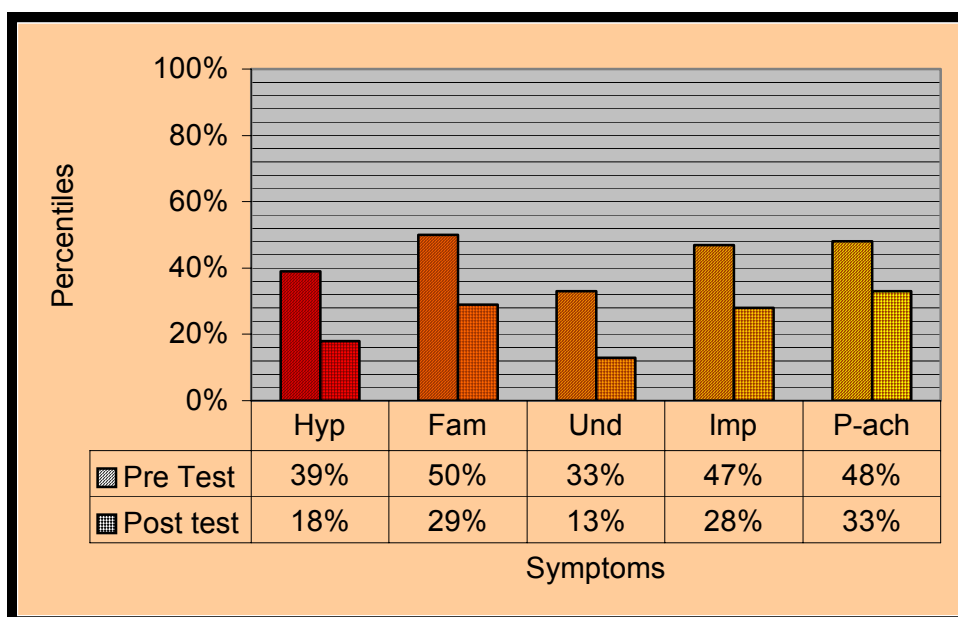
These scores indicate the most significant areas of improvement experienced by the mother; however, she reported an improvement in nearly all the areas covered by the Copeland Symptoms Checklist – except for "immaturity" where a rise in the score was reported. These areas will now be discussed.

| Inattention (Inatt) | Mary's mother reported that there was only a slight improvement in distractibility and reported that she is still struggling to get Mary into a routine. She still could not give her more than one task at a time. |
|---|---|
| Impulsivity (Imp) | Mary's mother experienced her as much less impulsive in that she now thinks before acting. For example when her hamster died, Mary didn't immediately say she wanted another one when her mother offered to buy one. Instead, she thought about it and then said she wanted a guinea pig because it would live longer. |
| Hyperactivity (Hyp) | According to her mother, previously Mary would not sit still when the family visited relatives of friends; now she only has to ask once and Mary will sit still or co-operate with what she asks. |

| **Underactivity (Und)** | On the checklist Mary's mother indicated that her leadership abilities have increased – she will now dare to lead and not only be happy to follow. |
|---|---|
| **Noncompliance (Non)** | According to Mary's mother improvement in this area is evident from the fact that she is now able to communicate better with Mary. As a result tasks given and chores expected by Mary's mom now gets done most of the time. |
| **Attention getting behaviour (Att-get)** | Mary's mother reported that she doesn't interrupt as frequently as before and that she doesn't ask as many questions. |
| **Immaturity (Immat)** | In the pre test, Mary's mother indicated that no aspects of immaturity were present. In the post test the score on immaturity increased (indicating an increased prevalence of immaturity). This is due to Mary's mother reporting that Mary relates better to younger children and that she prefers to be around them. |
| **Poor achievement (Ach)** | In this section Mary's mother reported improvement in the following areas:<br>• She understands and/or remembers what people say more effectively.<br>• She succeeds better in completing assignments.<br>• She does not rush the completion of her schoolwork as much as previously.<br>• Her handwriting is not as "messy" or as "sloppy" as before. |
| **Emotional Difficulties (Emot)** | Mary's mother reported no change in the emotional difficulties section; she indicated that Mary is still sometimes easily frustrated. |
| **Poor peer relations (Peer)** | An improvement was indicated in Mary's ability to follow rules of games and social interactions. |
| **Family interaction problems (Fam)** | This area showed the following improvement:<br>• Frequency of family conflict.<br>• Unpleasantness at social gatherings.<br>• Unpleasantness of meals.<br>• Arguments between parents and child over responsibilities and chores.<br>• Family stress resulting from the child's social and academic problems. |

Mary's teacher also completed the Copeland Symptoms Checklist as a pre test. On a request that she completes it as a post test as well, she reported that there was no change. She confirmed this after examining the results of the pre test. The results from the checklist she completed follow in table 4.1.

**TABLE 4.2:** SCORES FROM THE COPELAND SYMPTOMS CHECKLIST (PRE TEST) COMPLETED BY MARY'S TEACHER

| Inatt | Imp | Hyp | Und | Non | Att-get | Immat | Ach | Emot | Peer | Fam |
|---|---|---|---|---|---|---|---|---|---|---|
| 71% | 63% | 39% | 47% | 20% | 22% | 25% | 52% | 17% | 11% | n.a. |

These scores indicate that the five greatest concerns of the teacher, before commencement, and after termination of therapy were:

| | | |
|---|---|---|
| Inattention | - | 71% |
| Impulsivity | - | 63% |
| Poor achievement | - | 52% |
| Underactivity | - | 47% |
| Hyperactivity | - | 39% |

From the above scores it would appear that a significant improvement in the home environment could be noticed. This improvement could be the result of many different factors, or a combination of factors such as the therapeutic intervention (CCT), the introduction of the board game, or focused attention by the parents on Mary's attention difficulties. However, no marked improvement was evident in the school/classroom environment. This may be attributed to the fact that the intervention programme did not extend to the school. At the time the intervention programme was initiated, the parents did not feel comfortable with medication and wanted to explore other avenues first. As a result the intervention was strongly family-focused.

The therapeutic situations and the times when the board game was played at home were furthermore characterized as one-on-one, whereas, the school environment only incorporates group contexts. The content applied in the different settings also differs in the sense that the school makes use of academic content, whereas therapy and the board game are based on a "fun-approach".

The Copeland Symptoms Checklist is an instrument based upon the subjective opinions of those completing it. As a result, it is possible that the mother manipulated the results of the post test in an attempt not to disappoint the researcher or to give the "correct" answers. She may also have felt that her neglecting to report in a positive manner would reflect negatively on her own efforts and abilities. Finally, the mother's scores relating specifically to academic achievement cannot be regarded as objective or trustworthy, as she is not involved in the classroom. Moreover, at the time when the questionnaire was completed Mary had not yet received her latest report card, so the parents may have been under the false impression that an improvement did take place in the academic system.

After reflecting on the above results, it also becomes important to acknowledge that it may be unrealistic to expect of parents to perform CCT – even in the form of a board game. The game may be simple to understand and to play, but the dynamics of a therapeutic situation often are not. The mother may have progressed too rapidly between the different cards; she

may have been unaware of certain signals Mary sent out to indicate that she was not ready to move on.  Noticing and addressing these very subtle nuances emerging in a therapeutic environment often plays a very important part in the success of therapy – specifically in CCT.

### 4.4.2 QUALITATIVE INSIGHTS

From the data analysis conducted on the qualitative data (interviews, observations and feedback regarding the process)[43], it would appear that the main contributing factor from this study would be the positive effect the combination of CCT and parent guidance had – in this instance through the use of the board game as parent guidance strategy.  Therefore, the main cluster emerging from the study is:  combining CCT with parent guidance using a board game.  Secondary to this cluster, five qualitative insights emerged:

- ✧  Increased ability to distinguish between relevant versus irrelevant information.
- ✧  Increase in organizational thought in the therapeutic situation and at home.
- ✧  Improved communication resulting in improved skills to maintain discipline.
- ✧  Improved interaction among family members.
- ✧  Transfer of skills to the mother.

### 4.4.2.1  Ability to distinguish between relevant versus irrelevant information

In my observations of Mary it was evident to me, right from the start, that Mary experienced great difficulty in withholding attention selectively from both external and internal distractions (107)[44]:

> *"She gave me very long commands and often 'lost her place' in the giving of commands".*

> *"…but she struggles a lot in giving commands and in organizing her thoughts"* [Evaluation and reflection, CCT session 3; 10 May 2006].

In session 4 Mary admitted for the first time that she saw (irrelevant) pictures, like faces or animals when looking at the shapes (109):

> *"In her next turn, her attention shifted again and when I asked her about it, she showed me a "face" that she could distinguish from the shapes on the table, she then added that she could also distinguish the face of a dog.  This was the first time she*

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43  Compare chapter 1 sections 6.2 and 6.4
44  Refers to page number contained in Appendix C and/or D. Appendix C and D contains the field notes of the therapeutic sessions and the transcribed interview with the mother respectively.

*admitted that she was distracted by irrelevant information"* [Significant information from the session, CCT session 4; 15 May 2006].

This happened again in session 5 (110):

*"…the pictures and objects around us distracted her and she would often refer to one of them and try to start a discussion on it and then use it as a model of what command she gave me to build"* [Evaluation and reflection, CCT session 5; 17 May 2006].

Mary's mother also reported that Mary was sensitive towards distractions (118):

*"But she was really aware that, of the fact that sometimes, some things might steal her attention"* [Interview with the mother; 14 June 2006].

It also happened that she would start talking about something else and I had to direct her attention back to the session. From session 3 through to session 7 it was clear that Mary's attention was distracted by her own (irrelevant) thoughts. She would start to give a command and then it would seem as though she lost her own place while talking, to the extent that it became impossible to follow her commands (107-111). In those early stages of therapy Mary was seemingly unable to direct her attention away from these irrelevant distractions, it appeared that she was unaware of them.

Later on in our sessions Mary started to grasp the distinction – that certain objects or information was irrelevant to the command I gave her – when in session 7, after I gave her a command, she immediately removed the irrelevant shapes and started to work only with those that were relevant to the command, I gave (111):

*"M took away shapes she didn't need to execute her command"* [Evaluation and reflection, CCT session 7; 24 May 2006].

Another occurrence worth mentioning was in session 11 – during which Mary was again giving her long commands – when she suddenly interrupted herself and said that her command doesn't make sense and that she would start over (116):

*"A breakthrough however came when she was giving one of her very long commands again that do not make sense but realized it and stopped to tell me that it doesn't make sense and that she will start over"* [Evaluation and reflection, CCT session 11; 7 June 2006].

This illustrated that she was thinking about her own thinking and that she was starting to realize that it could also be irrelevant and distract her from her task. The same principles are also facilitated through the board game (as mentioned in Chapter 3[45]) and may indicate the influence of the reciprocal process (CCT ↔ home) of reinforcing the principles of CCT at home.

Mary's mother also experienced an improvement with regard to Mary's distractibility (118):

> *"I'm still having trouble asking her two things at the same time and then she'll only do the one. But she's aware of, you asked me two things, what was the other thing? Ya, she's aware of that"* [Interview with the mother; 14 June 2006].

When we terminated[46] therapy Mary was able to recognize when she was distracted by irrelevant information. She was aware of what it was that distracted her attention and she did her best to work around it (116).

> *"Mary told me that she saw faces in the shapes and that it stole her concentration"* [Evaluation and reflection, CCT session 14; 19 June 2006].

### 4.4.2.2 Increase in organizational thought in the therapeutic situation and at home

As mentioned previously Mary's thoughts would often appear to be elsewhere during the therapeutic sessions. Sometimes she would start to speak and would then just stare (107):

> *"She often sat and stared"* [Evaluation and reflection, CCT session 3; 10 May 2006].

On other occasions Mary would start referring to a square and would then switch to a rectangle, for example (108):

> *"In giving commands she sometimes confuses shapes. One minute she will say square and the next minute it will be a rectangle (meaning square)"* [Evaluation and reflection, CCT session 4; 15 May 2006].

In session 7 Mary and I decided on a couple of rules that we would apply in our sessions but also in our classrooms (111):

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[45] Compare chapter 3 section 3.6.3.1 to 3.6.3.3 where the link between CCT and the board game is discussed.
[46] Therapy was first terminated only with regard to the research and did continue without being recorded. It was, however, terminated completely soon after as the intervention needed to be redirected towards the inclusion of medication.

*"No touching of the shapes while giving a command or reflecting on the other person's execution of a command".*

*"Tell the other person when you see other pictures, either in the room or in the shapes lying on the table in front of you. We will do this as these pictures "steal" our concentration and it is not important (or relevant) while we are busy with our session".*

*"We will make eye contact while receiving commands as this is the best way to maintain focus and concentration"* [Orientation, CCT session 7; 24 May 2006].

These rules would be there to help us focus our thoughts and our attention. Mary really took them to heart and in the following sessions she applied them all the time (112; 113; 114):

*"We concentrated a lot on placing our hands on the table while speaking as M remembered it all the time"* [Evaluation and reflection, CCT session 8; 29 May 2006].

*"She was especially attentive towards all the "rules" we incorporated in previous sessions and often reminded me when I neglected to apply some of them"* [Evaluation and reflection, CCT session 9; 31 May 2006].

*"Mary concentrated well and kept her hands still while speaking"* [Evaluation and reflection, CCT session 10; 5 June 2006].

This seemed to play a significant role in helping her organize her thoughts, as she was now aware of what she needed to do to keep herself focused. A contribution to the therapeutic process occurred when the mother agreed to try to implement the rules at home as well. In this instance the game as a parent guidance tool (and a means to strengthen the hands of the therapist) appear to have a positive impact (112):

*"Mom and I discussed the "rules" M and I implemented in our sessions and she agreed to try to implement them as well"* [Discussion with mom; 30 May 2006].

The mother later reported how she implemented one of the rules that she found useful (118):

*"Like I had to call her on her name and say Mary look me in the eye, look at my eyes for her to know that I'm now serious or for her to know that I, I this might, she might not do what I'm asking"* [Interview with the mother; 14 June 2006].

It would thus appear that while Mary was previously unaware of her attention being diverted by irrelevant information, she is able to apply certain skills (through issues addressed in

therapeutic session and by her mother) that now enable her to organize her thoughts more productively.

### 4.4.2.3 Improved communication resulting in improved skills to maintain discipline

Mary's mother reported that the board game taught her that she should make Mary aware of her surroundings, but that she should also be aware of her own surroundings (121).

> *"I must make Mary aware and I must also be aware of my surroundings"* [Interview with the mother; 14 June 2006].

The mother is of the opinion that she was not aware of this before she started playing the game with Mary, and indicated that she implements the following strategies, (which she, in her opinion, derived from playing the board game), in her communication with Mary:

- She puts down everything when speaking to her daughter (120):

  > *"I should mmh, put down, I should not have any other actions like speaking on the phone"* [Interview with the mother; 14 June 2006].

- When she is speaking to Mary, she regards her as the only person around to speak to (120/121).

  > *"Mmh, now I know that um … I should, when I'm speaking to Mary I should speak to her as if I'm speaking to her alone".*

  > *"…and if I speak to Mary I must speak to her as if I'm speaking to Mary and nothing else is important only me and Mary and the issue that we are speaking about"* [Interview with the mother; 14 June 2006].

- She doesn't jump from one topic to another while speaking to Mary, but finishes one topic and then starts with another (121).

  > *"You shouldn't change topics inside a topic, I should finish a topic and then go on to the next topic …"* [Interview with the mother; 14 June 2006].

- She doesn't give Mary more than two tasks at the same time because she now knows that it will be too much for her to take in (121).

*"…and I shouldn't like task Mary with more than two because I know she won't be able to handle more than two tasks …"* [Interview with the mother; 14 June 2006].

- Where previously she would give Mary many tasks, only to find later that they have not been completed, she now gives a task and tells Mary to come tell her once it is done (121).

   *"Even in the home situation, she is doing the dishes for me. And I would ask her clean your room Mary and I would tell her something like all your shoes, put them in your cupboard and call me when you are done and she does it"* [Interview with the mother; 14 June 2006].

- She now only needs to look at Mary or speak to her once during a social visit to get her to listen and co-operate whereas this was not the case previously (123).

   *"…now … I can just look at her and she knows to sit down or just ask her once 'please behave yourself'"* [Interview with the mother; 14 June 2006].

Through the implementation of the board game a path was opened for parent guidance in a facilitative fashion. The researcher was enabled to utilize the board game as a reference when explaining certain concepts or issues pertaining to ADHD. By using the information from the parent guidance session, Mary's mother was able to develop ways of communicating more pro-actively with her child. This resulted in easing the process of getting Mary to complete tasks and chores and it also enabled her to relate to Mary in a "friendlier" way when she needed to discipline her. The improvement experienced by the mother highlights the possible advantages of coupling CCT with parent guidance. From this data it is, however, not clear whether including the principles of CCT in the board game made a significant difference, as the techniques Mary's mother now implements does not have a direct correlation with that of CCT.

In this regard the value of the board game was restricted to being a space to experiment – the mother could practise the skills discussed in parent guidance while playing the game. This also indicates that the game does not need to rest on CCT principles as the afore-mentioned skills can probably be practiced using a generic game as well.

### 4.4.2.4 Improved interaction among family members

At the start of therapeutic intervention Mary did not have a very good relationship with her brother. During the implementation of the game however, Mary invited her brother to play the game with her (117).

> *"…even want her brother to play with"* [Interview with the mother; 14 June 2006].

Their mother experienced this as a very positive sign and she is of the opinion that the introduction of the board game had a positive and "bonding" effect on their relationship. She indicated that while they had previously done things together as mother and daughter, the board game meant even more to Mary because it was aimed at improving her concentration – her development (122).

> *"Because suddenly she sees that we are doing something that is important to …mmh…her development. And we do something together as mommy and girly because we do a lot of other things together but it's just, the game teaches you like I said, so when she sees that this is something that she enjoys and I enjoy as well, she likes it. That is why she likes the game, it keeps me and her focused on the same thing"* [Interview with the mother; 14 June 2006].

The board game created the opportunity for family interaction and also strengthened relationships within the family. It appears to have added to the family's cohesion and sense of home (117).

> *"…even reminded you its time to play, even want her brother to play. My cousin visited for a few days, for a few days she involved my cousin…"* [Interview with the mother; 14 June 2006].

Together with the influence of parent guidance, the increased time spent together and focusing on the problem seems to constitute the primary contribution of the game. The fact that different members of Mary's family made time to play the game that was intended to help her, appears to have a positive influence on Mary and this influence may have affected their relationships positively.

### 4.4.2.5 Transfer of skills to the mother

Through combining parent guidance with the implementation of the game, Mary's mother acquired skills or strategies to apply when handling her child. These strategies appeared to make her feel more competent as a parent. She even attempted to share skills with relatives whose children also have an attention problem (120-121).

> *"I explained to my cousin how to handle her child, I think I got some lessons from the game because I wasn't aware of this but the game really helped me. I could show her and tell her this is what I do with Mary this is what the game has showed me that um I must make Mary aware and I must also be aware of my surroundings…"* [Interview with the mother; 14 June 2006].

Even though Mary's mother attributes her newly acquired skills to the game, it may have been that it only created the opportunity for her to become aware of how she could implement the skills. As mentioned earlier, these skills were facilitated through parent guidance. By implementing it while playing the game – but more importantly, in everyday life – she realised that it would not only equip her to cope better with Mary, but also help Mary to cope better (121).

> *"…when I'm speaking to Mary I should speak to her as if I'm speaking to her alone"* [Interview with the mother; 14 June 2006].

> *"I must make Mary aware and I must also be aware of my surroundings"* [Interview with the mother; 14 June 2006].

Some of the principles included in the game did seem to have a positive impact on the mothers' own directing of attention. She reported that the game taught her to focus on what she is busy with because she felt for her to help Mary focus, she herself also had to be focused (122/121).

> *"So the game is great in the fact that it keeps you focused on the game, especially with the cards, especially the colour cards, absolutely I love that, where you name the colour but not the name of the colour, its like, it keeps me focused"* [Interview with the mother; 14 June 2006].

> *"…this is what the game taught me that I should be focused as well because I know that for me to focus Mary will focus"* [Interview with the mother; 14 June 2006].

Thus, the qualitative insights revealed that using a board game based on the principles of CCT does not necessarily reinforce the afore-mentioned principles. A board game may however be useful when used to practise skills facilitated in parent guidance. The primary factor, however, is the positive influence experienced by the family as a result of including parent guidance in the intervention process and – through the board game – creating opportunities for the family to spend more time and focused attention on the problem.

## 4.5    CONCLUSION:  INTEGRATING QUANTITATIVE AND QUALITATIVE RESULTS

The pre tests suggested that Mary displayed a fear of admitting that she had attention problems – probably stemming from her fear of failure. It also emerged from the CCB that Mary was sensitive to both internal and external distractions. Her family and peer relations as well as her academic performance were affected negatively.

After the implementation of the intervention programme, it became apparent from the observations of both the researcher and the mother, that Mary exhibited an improved ability to distinguish between relevant and irrelevant stimuli in therapeutic sessions and at home. The results from the Copeland Symptoms Checklist completed by the mother supports the aforementioned claims. These were, however, one-on-one situations, which cannot be compared to a classroom situation. Even though the CCB profile indicates a significant improvement in Mary's ability to cope when faced with new tasks, she is still sensitive towards external and internal distractions. Mary's teacher also reported that she did not notice any change in Mary with regard to her ability to withhold attention selectively. As mentioned earlier, the fact that the intervention programme did not include the school, and medication was not included in the programme may have made a substantial contribution to the absence of improvement in the academic environment. The fact that the mother is not a trained therapist and may have, as a result, missed important therapeutic information vital to the success of CCT, could further have contributed to the principles of CCT not permeating to the school environment.

Combining CCT with parent guidance and providing opportunities for the mother to implement the skills facilitated in parent guidance seems to support the results of the Copeland Symptoms Checklist that family relations improved. This improvement included communication and interaction within the family system.

The insights presented in this chapter seem to support the combination of CCT with parent guidance. It even indicates instances where a board game may be of value, but caution should be taken when that board game is based on the principles of CCT. The inclusion of

these principles transforms the home-environment into a therapy room where the therapist is not present.  In such a therapy room valuable therapeutic moments may be lost; when the therapy is not done in the correct way, or when clues are not interpreted correctly, it may even be detrimental to the child's selective attention abilities.

These findings suggest that the principles of CCT did not permeate to other systems.  The reasons were, however, not explored in the study.

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## 5.1    INTRODUCTION

This chapter contains a summary of the research results, as presented in chapter 4, and are integrated with relevant literature.  The researcher will attempt to answer the questions guiding this study, and the limitations and contributions of the study are discussed. Recommendations regarding the use of the board game for further research and for use in practice are made.

## 5.2    SUMMARY OF THE RESULTS WITH REFERENCE TO RELEVANT LITERATURE

The combination of qualitative and quantitative data gathered in the study yielded various insights regarding the use of a board game to reinforce CCT in the home environment of a child with ADHD.

From the qualitative reports it transpired that Mary's ability to distinguish between relevant and irrelevant information improved.  During therapeutic sessions and at home, she became aware of times when her attention was distracted by both external and internal distractions. The results from the CCB post-test also appeared to give an indication that Mary was aware of being sensitive to particularly internal distractions.  However, this apparent awareness does not negate that her sensitivity towards both internal and external distractions – as measured on the post-test – remains significant. The CCB profiles suggest deterioration in Mary's profile measured after the intervention programme – combining CCT with parent guidance and the use of a board game based on the principles of CCT.  Literature supports the fact that – although effective in treating specific problems, behaviour therapy and parent guidance are not effective in the treatment of ADHD when used in isolation (Wenar & Kerig, 2000:130-131). It appears as though multiple approaches (i.e., therapy coupled with medication and parent guidance) is necessary to address ADHD with success: in certain centres a child with ADHD will not benefit optimally from therapy without medication and medication will not have the best possible effect without the parents' understanding of ADHD (by means of therapy) (McGuire & McGuire, 2001:67-68; Wenar & Kerig, 2000:129-130; Green, 1995:80-81).

The positive contribution of combining CCT and parent guidance became apparent. Through the facilitation of parent guidance, Mary's mother began to acquire skills, which improved her communication with Mary a great deal. In this regard, I concur with Sears and Thompson (1998:164) that communication, and more specifically improved communication between the different micro systems influenced by ADHD, may well form the heart of the process of coping with ADHD. In this study the improvement in communication appeared to have emerged from the opportunity the mother had to practically experience what was facilitated in the parent guidance sessions, while playing the game with Mary – note that the contribution was in playing together and implementing certain skills, not in using the principles of CCT. The improvement first began to surface when Mary's mother realised that she should pay attention to those aspects that may have appeared insignificant to her in the past – such as making eye contact or ensuring that she has Mary's attention before she gives her a task.

These are all elements that provide structure to communication, enabling the mother to make sure that Mary understood what is expected of her. Implementing this type of structure *can be formidable for some parents* (McGuire & McGuire, 2001:74). In the case of Mary and her mother, this adjustment led her to complete more of the tasks her mother gave her, but it also fostered a more understanding attitude in Mary's mother. Consequently, the mother experienced herself as more competent with regard to communicating with Mary in general, but more specifically in maintaining discipline (Goldenburg & Goldenburg, 2000:282).

Goldenburg and Goldenburg (2000:280) are of the opinion that parents who are taught specific skills, will not only apply those skills to solve the specific problem that they want to address, but will also use the skills to handle *other existing problems or ones that occur in the future or with other children.* Mary's mother realized that the skills we discussed in parent guidance, which she applied when playing the game with Mary, had wider applicability and she was able to use it in other contexts – such as in disciplining Mary and communicating with her. She also became aware of what she as a mother could do to help Mary cope better with symptoms of ADHD; she even attempted to invest in the lives of family members with children experiencing similar problems (McGuire & McGuire, 2001:72).

The relationships in Mary's family were reinforced by the fact that the family felt the board game created opportunities for interaction. These *special dates* that parents and children spend together do facilitate *a deeper bonding and stronger rapport with their child* (McGuire & McGuire, 2001:154)*.* Time spent exclusively on the intervention (which, evidently in this case does not need to include principles of CCT at home) may also lead to more commitment to and involvement in therapy and to *significantly greater results* (McGuire & McGuire, 2001:154). Mary was very excited about the game and invited different members

of her family to play it with her. She even invited her brother with whom she did not have a very good relationship prior to the implementation of the game. The board game appears to have facilitated a bonding experience between brother and sister in particular. Mary's mother is of the opinion that the fact that they spent time playing the game that was intended to help Mary, meant a great deal to her. It appears to be the positive effect of interaction – resulting from the opportunities the board game created for the family to spend time together – that led to the improvement. The fact that the game is based on the principles of CCT, which the mother attempted to reinforce, became peripheral. The same results may have been observed if any other (ordinary) game was introduced – with the explicit aim of helping Mary.

Finally, as a therapist, I experienced the effect of the game in many spheres of my interaction with the family. I immediately noticed a significant improvement in Mary's performance during a CCT session when she spent time with a family member, playing the game the day before the session. This again highlights the positive role of the increased interaction that occurred in the family system. Both Mary and her mother were excited about the game and the fact that it gave them a common purpose appears to have contributed to the improvement they experienced in the home environment. This excitement – especially form the mother's side – should, however, be viewed in light of the fact that she did not want to use medication and that she was desperate to find another workable solution. As a result, her reports regarding the game may have been influenced by this fact and may not be a true reflection of her experience.

It is difficult to estimate the impact of the game, as both CCT and parent guidance played a significant role in the intervention process. However, the deteriorated profiles serve as sufficient information to caution against the reinforcement of CCT by parents. In the next section a conclusion of the findings of the study will follow, summarising the afore-mentioned insights.

## 5.3     CONCLUSIONS GLEANED FROM THE STUDY

This research aimed to study the impact a board game, as a parent guidance strategy, could have on reinforcing CCT in the home environment of a child with ADHD. The findings of the study indicate that the use of a board game based on the principles of CCT, when used by a parent/parents with a child, may have a detrimental effect on the selective attention of that child. Because of the limited scope of the study, however, a direct causal relationship between the two factors cannot necessarily be established. The data from the CCB and the teacher-generated data in this study, however, is regarded as significant enough to indicate

some caution in terms of integrating CCT as part of parental intervention with a child with ADHD.

However, the generic use of a board game seemed to have impacted positively in terms of familial relationships and the confidence levels of the participants in the study. This is indicated by the observational and mother-generated data in the study.

Thus, the following may be reported:

- ✎ The communication within the family, as well as relationships among the family members, seems to have improved as a result of increased time spent together, focusing on the problem;
- ✎ Both Mary and her mother are now handling the symptoms of ADHD more effectively in the home environment.
- ✎ Mary's ability to selectively direct her attention when confronted with external and/or internal distractions remains problematic and detrimental to her academic performance. Her ability to attend to new tasks, however, seems to have improved.
- ✎ ADHD needs to be addressed on multiple levels.

The findings of this study thus suggest that a distinction needs to be made between the board game (which made a positive contribution), and the principles of CCT, which the parent had to reinforce in the home environment (which appear to have had a detrimental effect). In the next section this consideration will be carried over when answering the research questions.

## 5.4 ADDRESSING THE RESEARCH QUESTIONS

### 5.4.1 PRIMARY RESEARCH QUESTION

- ***How can a board game be used as a parent guidance strategy to reinforce CCT in a child's home environment?***

The findings from the research seem to indicate that a board game can be used as a parent guidance strategy, but not to reinforce CCT in the home environment. Using a board game, which mirrored the therapeutic situation and allowed the mother and child to apply the same principles of CCT dealt with in the therapeutic session, appears to have led to deterioration in the child's ability to selectively direct her attention.

However, the board game did offer the mother the opportunity to apply other skills – facilitated through parent guidance – which helped her to handle her daughter's symptoms

more positively.  These skills did not include those facilitated by CCT and were rather general, relating to communication and discipline.


### 5.4.2 CRITICAL QUESTIONS


- ***How can the constructs of CCT be accommodated in a board game for children in the middle childhood phase?***

As CCT is a relatively structured therapy, its constructs can successfully be accommodated in a board game by:

✎ grouping it into three categories aiming to facilitate the acquisition of the cognitive control *"Field articulation"*; listening skills; and paying closer attention to a task at hand;

✎ and converting the principles of each category into instructions that can be transferred onto cards[47]:

  o Bunny cards[48]: facilitate the acquisition of the cognitive control *"Field articulation"* through the use of the names of colours (irrelevant) printed in a different colour (relevant)

    Blue green yellow red

  o **Bear cards:** aim to facilitate the improvement of paying attention to a task at hand – as well as the acquisition of listening skills – by asking a child to perform a task that is simple at first but later incorporates some emotions.

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**Sit, stand, put up your right hand**

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  o **Butterfly cards:** contain the same shapes, in the same colours, as those used in CCT.  Through the use of these shapes the cards aim to facilitate the acquisition of the cognitive control *field articulation*.

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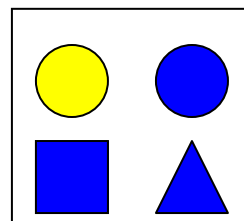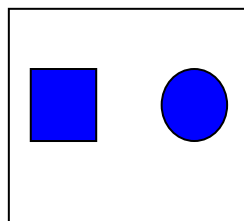
47 Compare chapter 3 section 3.6.3 for a discussion of the cards.
48 Compare chapter 3 section 3.3.4 for a discussion of the content the cards facilitated.

☝  Using these cards on a board[49] designed to facilitate the random use of the cards by players. The literature indicate that children in the middle childhood phase can identify with board games, as they are most comfortable with being less playful (i.e. play therapy for young children) yet not as verbally expressive as therapy intended for adolescents. The game was adapted to be suitable for children in the middle childhood phase by:

   o  keeping the board rectangular in shape like most board games;

   o  using primary colours appealing to both genders;

   o  and using an animal theme.

- ***How can parents reinforce CCT in the home environment by using a board game?***

The findings from the research indicate that caution should be taken when attempting to use parents to reinforce CCT at home. Whereas the principles of CCT were adapted in a board game and an effort was made to ensure that the game is user-friendly and simple, it still remains therapy. The mother is not trained to facilitate therapy and as a result may not have been able to recognize important therapeutic moments arising during time spent playing the game with Mary. It may even be detrimental to attempt reinforcing CCT in the home environment.

- ***What effect does parental involvement have on the CCT process?***

Qualitative insights indicate that parental involvement was an invaluable part of this study. Involving the mother in the implementation of the game led to an improved relationship between mother and daughter. The mother acquired skills during parent guidance which she could apply in everyday life to improve the communication between herself and Mary, resulting in improved discipline. The mother experienced an increase in confidence as a result of her newly acquired skills and wanted to share these with others. By being involved in the intervention process and making a conscious effort to apply the skills facilitated to her, mutual understanding and appreciation developed between mother and daughter.

## 5.5    ADDRESSING THE ASSUMPTIONS

**The first assumption was that an improvement might become evident in each of the micro systems due to the intervention.**

This assumption could not be proven by the findings, as an improvement was only visible in one micro system, namely the family system. With regard to the family system, the

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[49] Compare chapter 3 section 3.6.1 for a discussion of the board.

assumption was that the improvement would be the result of family members feeling empowered due to better understanding of the child with ADHD, as well as a result of becoming aware of positive traits associated with ADHD.  This assumption was only proven in part, as the improvement was to a large extent the result of a better understanding of the child with ADHD, but could also be ascribed to improved communication and improved family relationships.

In the second micro system, namely the school, an improvement could not be noticed.  As a result better behaviour in class and awareness amongst teachers concerning the positive traits of ADHD are not evident.  Data was not gathered regarding any effect on the third micro system namely the peers, as the focus was on the other micro systems, and therefore the assumption that the peers would appreciate the improvement in the social skills of the child with ADHD – and accept the child as their friend – were not tested.

It should, however, be kept in mind that this assumption rested on another assumption: that CCB would create an improvement in the symptoms of the child.  This assumption was made regardless of the fact that literature suggests a multi-faceted intervention (it came as a result of the parents who participated in the study not feeling comfortable with the inclusion of medication, therefore wanting to explore other avenues first).   With the inclusion of medication and an increased effort to reinforce CCT in the school environment, the assumption may prove to be more accurate.

**The second assumption is that improved relationships between the different micro systems may become apparent in the meso system.**

The findings of the study indicate that the relationship between the parent and the child (as two micro systems in the meso system) did indeed improve.  The individuals in these two micro systems now have more understanding and empathy for each other – yet this effect could not be seen regarding to the other micro systems found in the meso system.  The assumption that the individuals in the systems would become more tolerant towards each other and work together as a team, also only applies to the mother (and to other family members) and the child.  The relationship between the parents and the school in particular was not affected in any way detectable in this study.  This assumption was recorded as a by-product of the study.  Once again, it rested on the assumption that the parent would feel more comfortable to approach the school.  This type of interaction was, however, not facilitated by the research in any way.

The **third group of assumptions** bears relevance to the child with ADHD and the impact the intervention – in particular the board game – would have on her. The assumptions were that:

- *A child will be empowered through the principles of the game*

Through parent guidance and increased interaction and focus on the problem, communication improved in Mary's home environment. Consequently, Mary completed more tasks her mother gave her and this may have led to the improvement in her confidence. The principles of the game, however, did not seem to have any positive effect and as a result did not establish any empowerment in Mary.

- *Children will receive positive feedback from other systems*

The results do not specifically show instances where Mary received positive feedback from other systems. It is, however, implied in the fact that her mother began to adapt her communication in such a way that Mary was able to be successful in reacting to this communication. As a result she may have experienced this adaptation as positive feedback.

- *An improved relationship between parent and child will develop*

This assumption was proved by the one of the most prominent findings of the study: the mother reported a significant improvement in her relationship with her daughter.

## 5.6 LIMITATIONS OF THE STUDY

✍ The findings emerging from this study cannot by generalized because the data was gathered from a single case study. As a result, the sample used in this case is not representative of the total population of children with ADHD.

✍ As a result of the complexity of contributing factors, it is difficult to establish causal relationships.

✍ This study lent itself to potential researcher bias, as the researcher had a vested interest in the game succeeding. An attempt was made to compensate by discussing the research process and the interpretation of data during supervisory discussions and by reflecting on each therapeutic session in order to gain perspective on the session.

## 5.7    CONTRIBUTIONS OF THE STUDY

The introduction of the board game into the home environment led to improved family relationships, discipline, parent empowerment and education.  The use of the board game as a parent guidance strategy provided the therapist with the opportunity to identify with the family and work together in the process of managing attention problems.  The board game also became a mediator that linked the parents, the child and the therapist and this became a common factor that could be used to understand, address and question aspects of ADHD in a practical manner.  Using the game as common ground also enabled the mother and the researcher to "speak the same language" as words or terms used in the formal sessions were communicated to the mother.  She could then also use them – for example, mother and therapist used the phrase *"things stealing her attention"*[50].  Parent guidance should, however, not attempt to use the parent as a facilitator of CCT in the home environment, but should be separated from formal CCT sessions between child and therapist.

The study contributes to the expansion of the knowledge base of Educational Psychology as the effects of the board game constitute a new knowledge base.  CCT has never before been studied in the context of reinforcement through a board game.  The interpretation of the experience of the participants involved in the implementation of the board game brought to light cautionary aspects surrounding the use of the principles of CCT in the home environment.  This knowledge will bring about a revisit to the area of applicability of the game.  Thus the potential of the game to be improved in future may be unlocked.

Because the board game serves as common ground between the therapist and parents, it can be used in the practice of Educational Psychology to facilitate or enhance parent guidance, to empower the parent and create opportunities for the family to increase – and improve – their interaction.  The board game should, however, be kept generic by not basing it on the principles of CCT (instead the board game may rather be suitable for therapists to use as a tool in order to enhance the efficacy of CCT, or to alternate in between CCT sessions and the board game).

Finally, this study also indicates that active involvement from parents in an intervention programme for ADHD has a positive effect.  This appeared true from the fact that, even though medication is needed for an optimal outcome, many areas of potential improvement were still visible.  Thus the mere involvement of parents already constitutes a step towards coping with ADHD.

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[50]    Compare Appendix D p xxiii.

## 5.8 RECOMMENDATIONS

### 5.8.1 FURTHER RESEARCH

The study offers a snapshot of the impact of introducing the board game in the home environment of a family with a child with ADHD. Further research, allowing for a more comprehensive study of the impact of a board game on the different micro systems, is recommended. This research could include:

- Studies examining the nature of coupled parent guidance and CCT.
- Examination of the efficacy of using generic board games not based on the principles of CCT as a parent guidance strategy.
- An investigation into parent-teacher relationships where a child with ADHD is involved.
- A study that examines the possibility of allowing more than two players to play the game.
- Studies investigating the use of the board game by therapists.

### 5.8.2 EDUCATIONAL PSYCHOLOGY PRACTICE

Using a board game (not based on CCT) as part of parent guidance, together with facilitating CCT to children with ADHD, could make parents an active part of the intervention process – facilitating their own insights and allowing them the freedom to acquire skills in their own home, while still having the opportunity to discuss these with the therapist. This may have a positive effect on the outcome of therapy as the skills (or "solutions") will be the parent's own discoveries and may add to their being more committed to sustain the incorporation thereof, once formal therapy has been terminated.

## 5.9 CONCLUSION

ADHD is a disorder affecting many children and parents worldwide – leaving many parents desperate, frustrated and even hopeless. Nonetheless as a result of the high demands placed on teachers, it however increasingly becomes the responsibility of the parents to intervene and help their children with ADHD.

The findings from this study suggest that therapists can contribute by using parent guidance parallel to CCT. As a result of acquiring certain skills that will assist them on their journey with their child, parents may gain more confidence for their task. They have an important

role to play in the intervention process of a child with ADHD. Facilitating their role regarding this seems to have a positive effect on the relationship between parent and child, as well as in the family environment. Offering the opportunity for families to increase their interaction (by playing a board game) may have a bonding effect on the family as a whole, fostering more understanding attitudes.

From these findings it would thus appear that a significant part of coping with ADHD lies within the home environment. Fostering more understanding and empathetic relationships – by creating opportunities for interaction – appears to have had a positive effect on the family context, even though the symptoms of ADHD remained problematic in other contexts.

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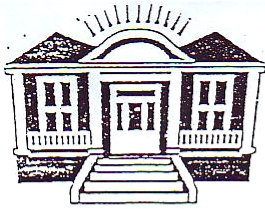
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CENTRAL GEORGIA INSTITUTE
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DEVELOPMENTAL MEDICINE
HEALTH SERVICES OF CENTRAL GEORGIA
*Part of Central Georgia Health System*

COPELAND SYMPTOM CHECKLIST FOR ATTENTION DEFICIT DISORDERS
Attention Deficit Hyperactivity Disorder (ADHD)
and Inattentive Attention Deficit Disorder (ADD)

This checklist was developed from the experience of many specialists in the field of Attention Deficit Disorders and Hyperactivity. It is designed to help determine whether your child/student has ADHD or ADD, to what degree, and if so, in which area(s) difficulties are experienced. Please mark all statements. Thank you for your assistance in completing this information.

Name of Child _____ Date _____

Completed by _____

Directions: Place a checkmark (✓) by each item below, indicating the degree to which the behavior is characteristic of your child/student.

| | Not at All | Just a little | Pretty Much | Very much | Score | |
|---|---|---|---|---|---|---|
| **I. INATTENTION/DISTRACTIBILITY** | | | | | | |
| 1. Has a short attention span, especially for low-interest activities. | | | | | | |
| 2. Has trouble completing tasks. | | | | | | |
| 3. Daydreaming. | | | | | | |
| 4. Easily distracted. | | | | | | |
| 5. Nicknames such as: "spacey," or "dreamer." | | | | | | |
| 6. Forgetful | | | | | | |
| 7. Starts many things – finishes few. | | | | | | = |
| | | | | | 21 | |
| **II. IMPULSIVITY** | | | | | | |
| 1. Easily excited. | | | | | | |
| 2. Becomes frustrated easily. | | | | | | |
| 3. Does not think before acting. | | | | | | |
| 4. Is disorganized. | | | | | | |
| Does not plan well. | | | | | | |
| Constantly moves from one activity to another. | | | | | | |
| 7. Dislikes group activities that require patience and taking turns. | | | | | | |
| 8. Requires much supervision. | | | | | | |
| 9. Constantly in trouble for doing things wrong or for forgetting to do things. | | | | | | |
| 10. Interrupts and talks out of turn. | | | | | | = |
| | | | | | 30 | |
| **III. ACTIVITY LEVEL PROBLEMS** | | | | | | |
| A. Overactivity/Hyperactivity | | | | | | |
| 1. Restlessness – either fidgets or is constantly on the go. | | | | | | |
| 2. Reduced need for sleep. | | | | | | |
| 3. Talks too much. | | | | | | |
| 4. Constantly running, jumping and climbing. | | | | | | |
| 5. Kicks covers off – moves around constantly while sleeping. | | | | | | |
| 6. Difficulty staying seated at meals, in class, etc. | | | | | | = |
| B. Underactivity | | | | | | 18 |
| 1. Sluggish – low energy level. | | | | | | |
| 2. Daydreaming, spaciness. | | | | | | |
| 3. Inattention due to low energy level rather than being distractible. | | | | | | |
| 4. Poor leadership ability. | | | | | | |
| 5. Has trouble getting started. | | | | | | = |
| | | | | | 15 | |

# COPELAND SYMPTOM CHECKLIST FOR ATTENTION DEFICIT DISORDERS (Continued)

| | Not at All | Just a little | Pretty Much | Very much | Score |
|---|---|---|---|---|---|
| **IV. NONCOMPLIANCE** | | | | | |
| 1. Repeatedly disobeys. | | | | | |
| 2. Argues a lot. | | | | | |
| 3. Ignores socially accepted standards of behavior. | | | | | |
| 4. Does not do what is asked of him/her. | | | | | |
| 5. Deliberately annoys others. | | | | | |
| | | | | | = 15 |
| **V. ATTENTION-GETTING BEHAVIOR** | | | | | |
| 1. Often needs to be the center of attention. | | | | | |
| 2. Always asks questions or interrupts. | | | | | |
| 3. "Picks on" other children and adults. | | | | | |
| 4. Acts like the "class clown." | | | | | |
| 5. Uses bad or rude language to attract attention. | | | | | |
| 6. Engages in other negative behaviors to attract attention. | | | | | |
| | | | | | = 18 |
| **VI. IMMATURITY** | | | | | |
| 1. Acts like a younger child. (year to 2 years younger) | | | | | |
| 2. Physical development is delayed | | | | | |
| 3. Would rather be around younger children and relates better to them. | | | | | |
| Often acts emotionally immature. | | | | | |
| | | | | | = 12 |
| **VII. POOR ACHIEVEMENT** | | | | | |
| 1. Achievements do not equal apparent ability. | | | | | |
| 2. Loses books, assignments, etc. | | | | | |
| 3. Has trouble understanding and/or remembering things people say. | | | | | |
| 4. Learning problems. | | | | | |
| 5. Fails to complete assignments. | | | | | |
| 6. Completes schoolwork too quickly. (Rushes through it) | | | | | |
| 7. Completes schoolwork too slowly. | | | | | |
| 8. Handwriting is "messy" or "sloppy". | | | | | |
| 9. Has trouble remembering directions and instructions. | | | | | |
| | | | | | = 27 |
| **VIII. EMOTIONAL DIFFICULTIES** | | | | | |
| 1. Unpredictable mood swings. | | | | | |
| 2. Irritated easily by minor things. | | | | | |
| 3. Insensitive to pain and danger. | | | | | |
| 4. Hard to calm down once over-excited. | | | | | |
| 5. Easily frustrated. | | | | | |
| 6. Temper tantrums, angry outbursts ("Pitches fits"). | | | | | |
| 7. Moodiness. | | | | | |
| Poor self-esteem. | | | | | |
| | | | | | = 24 |
| **X. POOR PEER RELATIONS** | | | | | |
| 1. Hits, bites, or kicks other children. | | | | | |
| 2. Has trouble following the rules of games and social interactions. | | | | | |
| 3. Is rejected or avoided by peers. | | | | | |
| 4. Does not like group activities. Prefers to be alone. | | | | | |
| 5. Teases peers and siblings too much. | | | | | |
| 6. Bullies or bosses other children. | | | | | |
| | | | | | = 18 |
| **XI. FAMILY INTERACTION PROBLEMS – PARENT(S) ONLY** | | | | | |
| 1. Frequent family conflict. | | | | | |
| 2. Social gatherings are unpleasant. | | | | | |
| 3. Parents argue over discipline. | | | | | |
| 4. Mother or father spends hours on homework with this child leaving little time for others in the family. | | | | | |
| 5. Meals are frequently unpleasant. | | | | | |
| 6. Arguments occur between parents and child over responsibilities and chores. | | | | | |
| 7. Family stress results from the child's social and academic problems | | | | | |
| 8. Parents feel: ☐ frustrated ☐ hopeless ☐ alone ☐ angry ☐ guilty ☐ afraid for child ☐ helpless ☐ disappointed ☐ sad and depressed | | | | | |
| | | | | | = 24 |

**UNIVERSITEIT VAN PRETORIA**
**OPVOEDKUNDIGE SIELKUNDIGE VERSLAG**

**STRENG VERTROULIK**

**1. IDENTIFISERENDE BESONDERHEDE**

NAAM: Mary*
DATUM VAN ASSESSERING: 2005-10-12 en 2005-10-13
GEBOORTEDATUM: 1996-10
OUDERDOM: 9 Jaar en 0 Maande
SKOOL:
GRAAD: 3

**2. REDE VIR AANMELDING**

Die ouers is besorg oor Mary se huidige skolastiese prestasie en benodig leiding met hul besluit of Mary graad 3 moet herhaal by Primary School om haar bestaande akademiese agterstande in te haal. Die ouers en die skool is ook besorg oor die moontlikheid van aandagafleibaarheid.

**3. RELEVANTE AGTERGROND**

Volgens die ouers het Mary se geboorte vlot verloop en daar was geen komplikasies gedurende die swangerskap sowel as haar vroeë kinderjare nie. Mary het geen ernstige kindersiektes gehad nie en word beskryf as 'n gesonde kind.

Mary is die jongste van twee kinders. Haar broer is 15 jaar oud. Die gesin het in April 2005 verhuis vanaf Port Elizabeth weens werksgeleenthede in

*Skuilnaam soos gebruik in die skripsie is ook in die verslag ingevul.

Johannesburg en is tans woonagtig in Pretoria. Mary se broer het nie saam met die gesin verhuis nie en is tans steeds in Port Elizabeth woonagtig by 'n familielid. Volgens die ouers kom Mary en haar broer nie goed oor die weg nie.

Volgens die ouers voel Mary dat die werk by haar nuwe skool baie moeiliker is as die werk waaraan sy gewoond was by haar vorige skool in die Oos-Kaap. Mary het onlangs in die oggend voor skool begin kla van maagpyn, dat sy siek is en dat sy nie skool toe wil gaan nie.

Volgens die ouers stel Mary se onderwyseres dat Mary nie eintlik maats by die skool het nie, dat sy met verskeie geleenthede in konflik was met ander kinders by die skool en dat hulle volgens Mary "telik" met haar is. Volgens die ouers, sowel as Mary se onderwyseres, was Mary al verskeie kere betrokke by geskille, tog word sy nie as 'n "moeilikheidmaker" geag nie aangesien hierdie geskille meestal toegeskryf kon word aan misverstande. Volgens die moeder het die onderwyseres na haar gesprek met die moeder (met goeie intensies) versoek dat die klas Mary moet "uitlos" (die bedoeling was glo dat hulle haar nie moet afkou nie). Die kinders het hierdie boodskap glo letterlik opgeneem, met die gevolg dat niemand met Mary wil speel nie.

Volgens die moeder beskryf Mary se onderwyseres haar as uiters stadig met die uitvoer van skriftelike opdragte. Sy beskryf verder dat Mary gou verveeld raak, heeltyd rond vroetel en dat sy woelig en aandagafleibaar is. Volgens die moeder was Mary se gedrag dieselfde by haar vorige skool en was sy volgens die ouers maar nog altyd so gewees.

Die ouers oorweeg dit tans om Mary na Primary School te verplaas. Vriende van hulle wat net soos die gesin verhuis het vanaf Port Elizabeth, het hul kinders na 'n paar maande vanuit dieselfde skool as wat

2

Mary tans skoolgaan, verplaas na _____ Primary School met groot sukses. Hul vriende beveel die verplasing ten sterkste aan.

Volgens die vader moet instruksies gereeld aan Mary herhaal word voordat sy take uiteindelik sal uitvoer, maar gewoonlik eers nadat sy klaar is met dinge wat haar besig hou op daardie tydstip. Volgens die ouers is Mary gemaklik daarmee om haarself vir lang periodes besig te hou en met haarself te speel.

Mary bly smiddae by 'n nasorg aangesien haar ouers werk. Volgens die moeder sê die versorger by die instansie dat Mary 'n baie vriendelike en liefdevolle kind is wat baie behulpsaam is. Sy hou glo baie daarvan om te help om na die kleiner kinders om te sien.

Alhoewel die ouers Afrikaanssprekend is, praat hulle uitsluitlik vanaf Mary se geboorte met haar Engels en ontvang sy vanaf die begin van haar skooltoetrede (insluitend voorskools) onderrig in Engels.

## Session 3 – 10/05/2006 (Wednesday)

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The dimensions of relevance/irrelevance for this session are many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Square | Big Thick Blue Rectangle |
| --- | --- |
| Big Thick Blue Circle | Big Thick Yellow Circle |
| Big Thick Blue Triangle | |

**Orientation**

I referred to our previous session where we started with only two shapes and then added more to sensitise her to the fact that our field of information would change again today.  I informed her that we will add a new colour today.

**Evaluation and reflection**

M was very tired and her concentration span was very short.  *She often sat and stare.  She gave me very long commands and often "lost her place" in the giving of the commands.*

**Significant info from the session**

M doesn't have too much trouble in executing commands *but she struggles a lot in giving the commands and in organizing her thoughts.*

**SESSION 4 – 15/05/2006 (MONDAY)**

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Square | Big Thick Blue Rectangle |
| --- | --- |
| Big Thick Blue Circle | Big Thick Yellow Circle |
| Big Thick Blue Triangle | |

**Orientation**

M and I discussed the last session when we were feeling so tired and we agreed that we would use the same shapes as we did the last time because we didn't get to build enough with it.

**Evaluation and reflection**

M struggled to give commands. It seems as if her thoughts get lost somewhere in the process and I had trouble following her commands. *In giving commands she sometimes confuses shapes. One minute she will say square and the next minute it will be a rectangle (meaning square).* She does very well following my commands and reflecting on my behaviour.

**Significant info from the session**

It is clear that she has an attention problem when confronted with her own thinking as well as external stimuli.

She would often see pictures (e.g. a face of an animal) in the shapes on the table and I told her that it wasn't her fault but that she needed to share it with me because it is the same things that happen in school. *In her next turn, her attention shifted again and when I asked her about it, she showed me a "face" that she could distinguish from the shapes on the table, she then added that she could also distinguish the face of a dog. This was the first time she admitted that she was distracted by irrelevant information.*

She said she gives me difficult commands because she wants me to give her difficult commands too. Probably due to success experience as she does well in executing commands!!

M and mom only played the game on Saturday this past week.

### SESSION 5 – 17/05/2006 (WEDNESDAY)

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| | |
|---|---|
| Big Thick Blue Square | Big Thick Yellow Square |
| Big Thick Blue Circle | Big Thick Yellow Circle |
| Big Thick Blue Triangle | |
| Big Thick Blue Rectangle | |

**Orientation**

I introduced today's session by telling M that we would be adding another shape.

**Evaluation and reflection**

M had trouble executing commands today. We talked about "thought thieves" – things around us, or things we think about that steal our concentration. Again she was reluctant to admit that there were things that distracted her but *the pictures and objects around us distracted her and she would often refer to one of them and try to start a discussion on it and then use it as a model of what command she gave me to build.*

**Significant info from the session**

M started to admit that her concentration was distracted but she wouldn't say by what. I find this reluctance very interesting. She is now at a point where she uses the "distractions" as ideas for commands to give me and it's possible that she is afraid if she tells me that they distract her, she won't be able to use them anymore and that will lead to "failure" in her eyes.

Mom and M played the game on Saturday.

## SESSION 7 - 24/05/2006 (WEDNESDAY)

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Circle | Big Thick Yellow Circle |
|---|---|
| Big Thick Blue Square | Big Thick Yellow Square |
| Big Thick Blue Triangle | Big Thick Yellow Rectangle |
| Big Thick Blue Rectangle | Big Thick Yellow Triangle |

**Orientation**

M and I looked at specific things that "stole" her concentration and decided to incorporate the following:

- No touching of the shapes while giving a command or reflecting on the other person's execution of a command.
- Tell the other person when you see other pictures, either in the room or in the shapes lying on the table in front of you.  We will do this as these pictures "steal" our concentration and it is not important (or relevant) while we are busy with our session.
- We will make eye contact while receiving commands as this is the best way to maintain focus and concentration.

**Evaluation and reflection**

This seemed to be a worth-while exercise.  I believe M understood better what I meant and we now had something concrete – in the form of "don'ts" or "rules" to work with.  M *took away shapes she didn't need to execute her command.*

**Significant info from the session**

We had a very good session and it can probably be attributed to the fact that M is starting to grasp the concept of relevant vs. irrelevant.
M and mom played the game on Saturday.

**SESSION 8 – 29/05/2006 (MONDAY)**

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Circle | Big Thick Yellow Circle | Big Thick Red Circle |
|---|---|---|
| Big Thick Blue Square | Big Thick Yellow Square | Big Thick Red Square |
| Big Thick Blue Triangle | Big Thick Yellow Rectangle | |
| Big Thick Blue Rectangle | Big Thick Yellow Triangle | |

**Orientation**

We started this session with a recap on the "rules" of the previous session.

**Evaluation and reflection**

*We concentrated a lot on placing our hands on the table while speaking as M remembered it all the time*; she even reminded me when I sometimes forgot.  This seemed to have a positive effect.

**Significant info from the session**

M liked to remind me if I forgot to put my hands on the table.  It seems as if success experiences means a lot to her and contributes a great deal towards the success we are experiencing at the moment.

### 30/05/06 – DISCUSSION WITH MOM

I had a discussion with mom and it came to light that she didn't understand exactly what was expected of her.  I explained to her again that the game is intended as a parent guidance tool that aims to reinforce the principals addressed in the therapy sessions.  We discussed the possibility of her implementing the game more often during the week and preferably on every day that we do not have a formal therapy session.  She mentioned that they would enjoy it if I could add some more shapes to the game as they have now used all the shapes.  *Mom and I discussed the "rules" M and I implemented in our sessions and she agreed to try to implement them as well.*

**SESSION 9 – 31/05/2006 (WEDNESDAY)**

*I created an "add-on pack" for the board game consisting of more shapes. I sent this, together with an explanation of the session content to mom to incorporate in the game.*

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Circle | Big Thick Yellow Circle | Big Thick Red Circle |
|---|---|---|
| Big Thick Blue Square | Big Thick Yellow Square | Big Thick Red Triangle |
| Big Thick Blue Triangle | Big Thick Yellow Rectangle | Big Thick Red Rectangle |
| Big Thick Blue Rectangle | Big Thick Yellow Triangle | |

**Orientation**

After a short informal discussion about both our well-being, we immediately started the session. We both know what the therapy is about and no real orientation is needed.

**Evaluation and reflection**

We had a very good session. M paid attention from the word go. *She was especially attentive towards all the "rules" we incorporated in previous sessions and often reminded me when I neglected to apply some of them.* We were also able to stretch our session by 5 minutes.

**Significant info from the session**

The way she paid attention today was striking and a huge improvement on any previous session; even the best ones. After the session I discovered that she played the game with her aunt the previous day. This was the first time they implemented the game more than once in a week and the day before our session. The effect is very positive and significant.

<p align="center">**SESSION 10 – 05/06/2006**</p>

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The complexity of the field of information will be increased by moving the shapes. In previous session they were located close together and will now be placed far apart. The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Square | Big Thick Yellow Square |
|---|---|
| Big Thick Blue Circle | Big Thick Yellow Circle |
| Big Thick Blue Triangle | |
| Big Thick Blue Rectangle | |

**Orientation**

I started today's session by introducing a change in our "game". I explained to M that we will be putting the shapes far apart from each other on the table.

**Evaluation and reflection**

M complained of a tummy ache before the session. Despite this the session went very well. *Mary concentrated well and kept her hands still while speaking.* After about 20 minutes she said

that her tummy was really sore.  We each had one more turn and then stopped.  She confused the square with the rectangle once.

**Significant info from the session**

I thought it was a great breakthrough that M was able to concentrate even though she was feeling sick.  She also had a blocked nose.  M mentioned that her maths teacher said she concentrates better. They played the game on Friday and Saturday and the influence of the game on CCT seems to be positive and it appears to have a sustaining effect.

**SESSION 11 – 07/06/2006 (WEDNESDAY)**

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The complexity of the field of information will be increased by moving the shapes.  In previous session they were located close together and will now be placed far apart.  The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Square | Big Thick Yellow Square |
|---|---|
| Big Thick Blue Circle | Big Thick Yellow Circle |
| Big Thick Blue Rectangle | Big Thick Yellow Rectangle |
| Big Thick Blue Triangle | Big Thick Yellow Triangle |

**Orientation**

Informal chatting.

**Evaluation and reflection**

MD wasted a lot of time by making her shapes fall down and then building them again. I don't think she felt like our session today. *A breakthrough however came when she was giving one of her very long commands again that do not make sense but realized it and stopped to tell me that it doesn't make sense and that she will start over.*

**Significant info from the session**

It seems like she is starting to think about what she is saying.

### SESSION 14 – 19/06/2006 (MONDAY)

**Goals for the session**

To develop the child's capacity to direct attention selectively at complex fields and configurations of information in terms of dimensions of relevance/irrelevance.

The complexity of the field of information will be increased by moving the shapes. In previous session they were located close together and will now be placed far apart. The dimensions of relevance/irrelevance for this session are the use of many shapes (circle, square, triangle and rectangle) and the progression from one colour (blue) to many colours (blue and yellow).

**Material**

| Big Thick Blue Square | Big Thick Yellow Square | Big Thick Red Triangle |
|---|---|---|
| Big Thick Blue Circle | Big Thick Yellow Circle | Big Thick Red Circle |
| Big Thick Blue Rectangle | Big Thick Yellow Rectangle | Big Thick Red Rectangle |
| Big Thick Blue Triangle | Big Thick Yellow Triangle | |

**Evaluation and reflection**

Good session. Mary maintained good concentration throughout the session. I think we can terminate sessions for research purposes. *Mary told me that she saw faces in the shapes and that it stole her concentration.*

H: How did you experience the process of implementing the game?

J: It was very interesting because ... mh... Mary, she knew the game before ... you guys showed us how it worked ... so, for her, mmh, she felt proud because she could show us something that she knew and we didn't know. It was fun at first, actually it was fun throughout. Mmh ... she ... she really did know how to play, she showed us ... mmh ... *even reminded you its time to play, even want her brother to play with. My cousin visited a few days, for a few days she involved my cousin*, very exited to show somebody else how this worked and ... what amázed me actually was that when people asked her what the game was about she, she would actually tell them it was helping her to focus, it was helping her to be aware of stuff that was stealing her attention, she really knew what this was for. Mmh ... people sometimes talked to me about it, its gréát this child knows what this is for. Mmh ... I'm so glad she paid attention to you Hestie when you explained this game to her and why, you explained to her what was this about what it is for, so she would explain to people it wasn't like, something that, ag some lady showed me this game to play I don't know what it is about, she really knew what it was for. It really amazed me.

*Improved family relationships*

*Mary knew that the game was to help her – It was NB to her.*

H: So she, she understood it, and what about you?

J: She was able to make me understand because you explained to me ...mmh, mmh ... I grasped the concept but I didn't know what it was about. But when we got

home and then we sat down, she literally showed me this is for this, the cards the bunnies the, the butterflies and stuff and the shapes.  She explained to me as we went along so she was in a position to really take from you and give it to me.

H: If you think about your, this game in your house, your home environment, what would you say how did the process go in implementing the game?

J: Mmh ... Mary was constantly really aware of, of, of, things stealing her attention, mh, but she still, I, I can't, I don't know if she allows things to steal her attention or if she wasn't aware that she was still doing it.  *Like I had to call her on her name and say Mary look me in the eye, look at my eyes for her to know that I'm now serious or for her to know that I, I this might, she might not do what I'm asking.*  Mmh, I had to constantly like say Mary look in my eyes, look at me, look at me, you know.  *But she was really aware that, of the fact that sometimes, some things might steal her attention.*  So mmh I'm still having trouble with routine, getting her into a routine.  I'm still really …mmh… getting, *I'm still having trouble asking her two things at the same time and then she'll only do the one. But she's aware of, you asked me two things, what was the other thing?  Ya, she's aware of that.*

H: What would you say the, would you say that any of the principals of this game was playing into your daily life, your way of handling her, any of the things that you were taught through this game?

J: I would say so, mmh … like the cards with the, the, the, where you have written down the colours but you written it down say like the yellow you written in the colour red, mmh … ya, she would pay attention to detail a bit more, at home. Because that card showed us that although the word yellow is there, that yellow is written in red for you to know, to see the red instead of the yellow. Ya, she paid attention to detail at home … not as fast as I would want her to, but she is. Mmh, the other day her hamster died, I forgot to tell you, he died, Jerry. She was so sad because Jerry died. I was busy in the kitchen, when she called Jerry he didn't come out of his house, and then she pulled me and wanted me to see that Jerry doesn't want to come out of his house, she was scared, I know, I think she knew something was wrong. And then she … and I was on my phone, and my phone rang again and she kept saying "call Jerry, call Jerry", and then he didn't come out and I looked at the house, still on my phone, and I looked at the house and then I "come on Jerry", and I, and I tilt it like this and here poor Jerry fell out of the house. I put this phone down immediately and I was like, she was like shocked and cried immediately and I was like "aah" and Jerry was dead and he was lying there and she up and went out of her room and I came and then after a while she came to me and she said it's not that I'm not sad and that I hate Jerry but can I go watch cartoons now. Mmh…she was like aware that this small something died, Jerry was her friend and … it's not that she's not sad or that she didn't like Jerry, but I think its her way of coping with the sudden thing of Jerry. Like

we had a funeral the day after that because it was late when we discovered that Jerry was dead and it was like this specific spot where we had to bury Jerry and the dogs mustn't come near to this spot … mmh, we had to put this sand on Jerry and some little bit of ground and … two yellow flowers, but like it was detail and we had a prayer for Jerry mmh … it was like she was really there and then I wanted to know should we get another hamster, she said "no mummy he will die again after two years" because she knows they die after two years "he will just die after two years again and then, and then I will be sad again" so, e, for me its like she's aware, this is detail and she's aware of this.  She now wants a,a,a guinea pig because they're bigger and they live longer and so for me it's detail.  She was very sad, for two nights she didn't sleep in her room.  So I think this game really, really had an impact on Mary.

*Aware of surroundings – organize thoughts*

H: If you think now about you and the game, did you learn anything from the game that you could apply when handling Mary?

*Improved communication – better handling of discipline*

J: I did definitely.  *Mmh, now I know that um … I should, when I'm speaking to Mary I should speak to her as if I'm speaking to her alone.  I should mmh, put down, I should not have any other actions like speaking on the phone.*  She wanted to tell me something I should have put the phone down and listen to her, I, I know this from this game, it's a very interesting game.  My other cousin, she's a teacher, she visited the other day and Mary showed her this game.  Her child actually has the same, I can't diagnose the child but really.  I got her interested in this game and *I explained to my cousin*

*Mom became aware of areas that she could work on that may enhance the home environment*

*how to handle her child, I think I got some lessons from the game because I wasn't aware of this but the game really helped me. I could show her and tell her this is what I do with Mary this is what the game has showed me that um I must make Mary aware and I must also be aware of my surroundings and if I speak to Mary I must speak to her as if I'm speaking to Mary and nothing else is important only me and Mary and the issue that we are speaking about. You shouldn't change topics inside a topic, I should finish a topic and then go on to the next topic and I shouldn't like task Mary with more than two because I know she won't be able to handle more than two tasks*, so <u>this is what the game taught me that I should be focused as well because I know that for me to focus Mary will focus</u>. And she was really interested in the game. I showed her the game, how it worked, why it is like this, even Mary could explain what it was for. Really this game … I think … um … and she's a teacher and she also works with children in her class that is not paying attention, she really was interested in this game.

H: So would you say that this game had an impact on the home situation, not only on her concentration?

J: Even in the home situation, *she is doing the dishes for me. And I would ask her clean your room Mary and I would tell her something like all your shoes, put them in your cupboard and call me when you are done and she does it.* I understand better how to talk to her and she is more aware of what I ask her to do.

H: Do you have any problems with the game or any suggestions?

*Mom realized it is a team effort*

*Improved comm., improved discipl – Mary had a better chance of under-standing and doing what was asked of her.*

*One of Mom's contributions to helping*

J: Mmh … if maybe more than two can play the game, mmh… why I say so is that, then it's more exciting to see because if it's only two that play its now she throw, I then throw, its my turn then her turn.  If its like four people or even three people, because we're always more than two people here at home so now if me and Mary play the game or whoever and Mary play the game, then the others do not play along, so if you can include maybe her brother or her father.

H: That makes sense.

J: And that's all that I'd change.

H: What would you say are possible strengths of this game?

J: The game teaches you to, to, really focus on the game we are busy with.  You've got to be there, because Mary knows this game and she knows when you're just running through it, she knows that, and I don't want to give her the idea that I'm just doing this for the sake of doing it.  *So the game is great in the fact that it keeps you focused on the game, especially with the cards, especially the colour cards, absolutely I love that, where you name the colour but not the name of the colour, its like, it keeps me focused.*

H:  If you say you must really be there because she knows when you're just running through it, do you think that its adding to your relationship?

J:  It does.  *Because suddenly she sees that we are doing something that is important to her and important to …mh … her development.  And we do something together as mommy and her girly because we do a lot of other things together but it's just, the game teaches*

*Mom and Mary understand each other better*

*Helped mom be more focused as well*

*Mary feels there is hope and mom is prepared to help*

*you like I said, so when she sees that this is something that she enjoys and I as well enjoy, she likes it. That is why she likes the game because it keeps me and her focused on the same thing.*

H: And if you now think of before I introduced the game to you, what would you say is a major difference now after you started using the game? Is there anything that you can mention?

J: There is. Like Mary, she is like heavily restless at times. When we were somewhere like at somebody's house or so, previously, then you, she was like all over the place sometimes and she did not like it you see so I had to call her and say don't do this, or do this, silly things. I had to ask her a few times Mary please behave yourself. *Now … I can just look at her and she knows to sit down or just ask her once "please behave yourself".*

H: To what would you attribute this?

J: To her knowing that, I think it comes back to the game, the game is teaching Mary to be aware of her surroundings, to be aware of what she's doing in real life.

H: Is there anything else you would like to add?

J: No, I think that is everything.

H: Thank you very much for your time.

February 16, 2006

University Of Pretoria
Department of Educational Psychology
Head of Department: Prof I Eloff

Dear Madam:

I am a masters student in your department and I am currently in the process of writing my dissertation under the supervision of Dr S Bester. For my research I will need to select two research participants who display symptoms of ADD. I hereby request permission to use the Training Facility at your department for my research. This will entail that two research participants will be selected from the Training Facility and that these two participants, together with their parents will then work with me in therapy. I would also like to request the use of the therapy rooms at the Training Facility as a venue for my therapy.

I appreciate your consideration in this matter.

Sincerely,

Hestie Byles

Student number: 20021781

University of Pretoria

Pretoria 0002 Republic of South Africa  Tel 012-420-4111
Fax 012-362-5168 / 012-362-5190 *http://www.up.ac.za*

**Faculty of Education**

20 February 2006

Dear Hestie,

**PERMISSION TO DO RESEARCH AT THE TRAINING FACILITY OF THE DEPT OF EDUCATIONAL PSYCHOLOGY**

With this I give permission for you to conduct the empirical work for your master's degree study in the training Facility of the Dept of Educational Psychology, UP.  You will be allowed access to two participants who display diagnostic criteria for ADD and you will be able to use the physical facilities available at the Training Facility.

Best wishes for your study,

**Prof Irma Eloff**
**Head: Dept of Educational Psychology**
**Faculty of Education**
**University of Pretoria**
**PRETORIA**
**0002**
**Tel: (012) 420 5503**
**Email:** irma.eloff@up.ac.za

**EXPLORING THE USE OF A BOARD GAME AS PARENT GUIDANCE STRATEGY TO REINFORCE COGNITIVE CONTROL THERAPY IN THE HOME ENVIRONMENT**

2 March 2006

Dear Parent

I hereby wish to invite you and your child are invited to participate in a research project aimed at empowering you as a parent to play a proactive role in addressing your child's symptoms of attention deficit by using a board game.

Your participation in this research project is voluntary and confidential. You will not be asked to reveal any information that will allow your own or your child's identity to be established, unless you are willing to be contacted for individual follow up interviews. Should you declare yourself willing to participate in an individual follow up interview, confidentiality will be guaranteed and you may decide to withdraw at any stage should you wish not to continue with an interview.

The results from this study will be used to facilitate parent guidance in families with a child who shows symptoms of attention deficit.
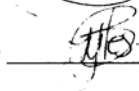
If you are willing to participate, and to allow your child to participate in this study, please sign the letter as a declaration of your consent, i.e. that you participate in this project willingly and that you understand that you may withdraw form the research project at any time. Participation in this phase of the project does not obligate you to participate in follow up individual interviews, however, should you decide to participate in follow-up interviews your participation is still voluntary and you may withdraw at any time.

Participant's signature _____    Date 18\04\2006

Researcher's signature _____ H. Byles _____    Date 18/04/06

Yours Sincerely

Hestie Byles

ANNEXURE D

UNIVERSITY OF PRETORIA

FACULTY OF EDUCATION

RESEARCH ETHICS COMMITTEE

| | |
|---|---|
| **CLEARANCE CERTIFICATE** | **CLEARANCE NUMBER : EP06/06/04** |
| **DEGREE AND PROJECT** | M.Ed Educational Psychology |
| | Exploring the use of a board game as a parent guidance strategy to reinforce cognitive control therapy in the home environment |
| **INVESTIGATOR(S)** | Hestie Byles |
| **DEPARTMENT** | Educational Psychology |
| **DATE CONSIDERED** | 20 June 2006 |
| **DECISION OF THE COMMITTEE** | APPROVED |

This ethical clearance is valid for  2  years from the date of consideration  and may be renewed upon application

| | |
|---|---|
| **CHAIRPERSON OF ETHICS COMMITTEE** | Dr C Lubbe |
| DATE | 20 June 2006 |
| CC | Dr S Bester |
| | Prof I Eloff |
| | Mrs Jeannie Beukes |

This ethical clearance certificate is issued subject to the following conditions:

1. A signed personal declaration of responsibility
2. If the research question changes significantly so as to alter the nature of the study, a new application for ethical clearance must be submitted
3. It remains the students' responsibility to ensure that all the necessary forms for informed consent are kept for future queries.

Please quote the clearance number in all enquiries.

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