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## CHAPTER TWO

### AUTISM AS A SOCIAL PHENOMENON

#### 2.1 INTRODUCTION

As the goal of the study is to develop and evaluate a play technique programme for autistic children in middle childhood, this chapter aims to offer an overall understanding of autism, looking at the causes, characteristics, behaviour, as well as the effect of autism on society.

Autism is defined by the Autism Society of South Africa (2006) as “a lifelong, extremely complex and often devastating disability, which appears to stem from a multi-factorial origin with a genetic base that interacts with environmental triggers, resulting in disordered brain development and biochemical function”. Baron-Cohen and Bolton (2002: 1) define autism accordingly:

Autism is a condition that affects some children from either birth or infancy, and leaves them unable to form normal social relationships, or to develop normal communication. As a result, the child may become isolated from human contact and absorbed in a world of repetitive, obsessive activities and interests.

Both these definitions highlight the longevity of the disorder (normally from birth or early infancy), the fact that it continues throughout life, and the difficulty that the individual diagnosed with the disorder has in functioning, particularly on a social level.

Exhorn (2005: 6) comments that “the word autism is the catch-all term that many people use when referring to the spectrum of autistic disorders. The more current term for autism is ASDs or Autism Spectrum Disorders”.



Autism is a disorder that is being diagnosed and recognized in more and more children in today's society. Aarons and Gittens (1996: 1) comment on this in the following statement:

Until quite recently, autism, with its paradoxical signs and symptoms, was considered to be a rare condition. It had an aura of fascination – to such an extent that the majority of the population had a viewpoint about it without necessarily having had any direct experience of the condition.

From the researcher's point of view, the above statement shows the lack of information about and research into autism, particularly in relation to play techniques and the use of them with autistic children. However, the public at large seems to be aware of the disorder, although their understanding can be considered, more often than not, incorrect. As Exhorn (2005: 7) states, "many people used to subscribe to the myth that everyone with an ASD (Autism Spectrum Disorder) behaved like the Dustin Hoffman character in the movie *Rain Man*...or that all children with ASDs (Autism Spectrum Disorders) were aloof and unresponsive, rejected hugs, and never showed affection". However, autism can now be considered a lot more complex than that, in the researcher's opinion.

Autism, according to Trevarthen, Aitken, Papoudi and Roberts (1996: 4), is a compound of two Greek words – 'aut-', which means 'self', and '-ism', which implies 'orientation or state'. Therefore, in a simple statement, autism can be considered a condition of an individual who is unusually absorbed in him/herself. An individual with autism explained her disorder as "one bucket with several different jigsaws in it, all jumbled together and all missing a few pieces each but with a few extra pieces that didn't belong to any of these jigsaws" (Williams, 1996: 1). The International Child and Youth Care Network (2006) comments that "all people with this disability are affected by a triad of impairment, which manifests in the following areas of development: language and communication, social interaction and imagination". Stone (2006: 12) agrees with this, stating that



a child diagnosed with autism will show “atypical development in three primary areas: (1) social skills, (2) language and communication skills, and (3) repetitive and restricted behaviors”.

The field of autism, according to the researcher, appears to be an ever-growing sphere, in both the prevalence of it and research being done with regard to it. The researcher understands autism to be disorders, rather than a disease, that impacts mainly the social functioning of an individual. The impact of the disorder can vary in severity and is unique to each individual diagnosed with disorders. Individuals who are placed in the circumstances of living with autism are faced with a challenging, and at times frustrating, life. However, there are various ways in which their quality of life can be improved.

As has been previously stated, autism was considered a rare condition for a long period, with this only really beginning to change over the last ten to 15 years. Autism was initially defined by the pioneers Leo Kanner and Hans Asperger, who worked independently of each other in publishing the first accounts of autism (Frith, 1989: 7). The researcher feels that it is important to note at this stage that although this reference (Frith) can be considered old, it is also considered vital literature when looking at the subject of autism. Therefore, information from this literature has been included in this study. Frith (1989: 7) states that the “publications, Kanner’s in 1943 and Asperger’s in 1944, contained detailed case descriptions and also offered the first theoretical attempts to explain the disorder”. Frith (1989: 7) went on further to write that the term “autistic” was first identified by Ernst Bleuler in 1911, when referring to a basic disturbance in schizophrenia.

Robledo and Ham-Kucharski (2005: 2) also mention that the term “autism” was first used in 1911 by Ernst Bleuler. However, it is also highlighted in the publication that the “first mention of autism as a disorder appeared in Baltimore in



doctor Leo Kanner's 1943 paper "Autistic Disturbances of Affective Contact", which described his observations of children who exhibited symptoms that at the time were considered indicative of mental or emotional handicaps". Robledo and Ham-Kucharski (2005: 2) go on further to state that "a year later, Viennese doctor Hans Asperger wrote about a condition with symptoms strikingly comparable to those described by Kanner, and which was later termed Asperger's Syndrome, a type of Autism".

Exhorn (2005: 6) writes that "the word *autism* comes from the Greek word *autos*, which means *self*. Exhorn (2005: 6) agrees with the two previous statements, stating that Kanner and Asperger "are considered the pioneers in the field of autism...in the early 1940's".

The researcher is quite interested to notice that the disorder, autism, was identified a relatively long time ago. However, it seems that it has only been over the last ten to 15 years that autism has really come to the foreground and become the focus of many studies, with many people, professionals and parents, searching urgently for the answers.

As previously stated, in this chapter the researcher aims to give the reader a better understanding of autism, looking at the causes, characteristics, behaviour, as well as the effect of autism on society. It is important to note, as stated by Exhorn (2005: 6), that autism is a catch-all term that many people use when referring to the spectrum of autistic disorders. The term actually refers to a group of five different diagnoses namely, Autistic Disorder, Asperger's Disorder, Childhood Disintegrative Disorder (CDD), Rett's Disorder, and PDD-NOS (Pervasive Developmental Disorder-Not Otherwise Specified)". These will be discussed in greater detail at a later stage, but all five diagnoses fall into the Autism Spectrum and have often simply been referred to as "autism". For the



purposes of this study, the researcher will use the term 'autism', which refers to all the diagnoses within the Autism Spectrum.

Autism is a disorder that requires a great deal of attention given the increasing number of children who are now being diagnosed with this disorder (Botha, 2005). Although the disorder is not curable, it is treatable and there are ways in which both the parent/s and professionals can improve the quality of life of these individuals. In order to gain a better understanding of the disorder, one needs to look at the various definitions that are given for the disorder.

## **2.2 DEFINING AUTISM SPECTRUM DISORDERS**

Many definitions for autism have been offered. The researcher will mention only a few of them in order to enhance the understanding of the concept autism.

The Autism Checklist (2006) states that "autism, which affects thought, perception and attention, is not just one disorder with a well defined set of symptoms; autism is a broad spectrum of disorders, which ranges from mild to severe".

According to The Source (2006) autism is:

A life-long developmental disability which impairs various aspects of typical development and lasts a lifetime. Autism is a syndrome, which means that it is a condition defined by the existence of a collection of characteristics and the symptoms of autism are usually apparent within the first 36 months of life.

Robledo and Ham-Kucharski (2005: 1) state that "autism is a neurological disorder that usually manifests itself early in the toddler years. It hampers a



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child's ability to learn how to communicate, interact with others socially, and indulge in imaginative play".

These previous definitions begin to highlight the three areas that an autistic child will battle with, namely communication, social interaction and imaginative play. The researcher is of the belief that underdevelopment in any of these areas can and does cause great difficulty for the individual affected.

Exhorn (2005: 7) states that "autism is not a disease, such as pneumonia or high blood pressure ... it is a development disorder – a condition in which there is a disturbance of some stage in a child's typical physical and/or psychological development, often retarding development".

The International Child and Youth Care Network (2006) defines autism as "a lifelong, complex and variable, pervasive developmental disability, which stems from a multi-factorial origin and results in disordered brain developmental function".

Adding to this definition, the Autism and Pervasive Developmental Disorder Fact Sheet (2006) defines autism according to the "The Individuals with Disabilities Education Act (IDEA)", where it is stated that autism "is a developmental disability significantly affecting verbal and non-verbal communication and social interaction, usually evident before age three, that adversely affects a child's educational performance".

The National Alliance for Autism Research (2006) states that autism is "a complex brain disorder that often inhibits a person's ability to communicate, respond to surroundings and form relationships with others".

Within these previous statements one is able to identify that autism stems from disorders within the brain. Baron-Cohen and Bolton (2002: 33) comment on this



by writing that “various causes of autism all share the characteristic of damaging regions of the brain that are responsible for the development of normal communication, social functioning, and play”. However, as will be seen in later sections of the chapter, the actual causes of autism are still very much a matter of debate.

The researcher is of the opinion that all the above definitions provide an understanding of what the theoretical definitions of autism are. However, the researcher’s own professional experience suggests that each individual who is diagnosed with the disorder responds and behaves differently. These definitions are therefore merely a guideline, and then the parent/s or professionals need to deal with the child as a unique individual within his/her own unique circumstances. Stone (2006: 11) comments on this, by stating that “no two children are alike, whether they have autism or not. In the same way, each child with autism is an individual, with his or her own personality and unique characteristics”.

Now that various definitions have been given for autism, it is necessary to focus on the specific characteristics associated with autism. The researcher would again like to highlight the fact that each child is unique, even if there are two children who are given the same diagnoses. The following characteristics can thus be considered guidelines, with different combinations and difficulties arising with different children.

### **2.3 CHARACTERISTICS OF AUTISM**

Autism can be considered a confusing and challenging disorder that is still being researched, with growing understanding being gained. Exhorn (2005: 3) highlights the enormity of being faced with a child with autism, when she states “When I finally got to the bottom of it, when I finally found the right doctor to tell



me what was the matter with our son, I heard the words that no parent wants to hear: 'Your son has autism'".

The Autism and Pervasive Developmental Disorder Fact Sheet (2006) states that autism is "not just one disorder with a well defined set of symptoms; autism is a broad spectrum of disorders that ranges from mild to severe". A close look at the disorder reveals that there are various characteristics that are mentioned by many authors. The researcher is of the belief that in order to gain the best understanding of the disorder, various authors and their ideas need to be mentioned.

According to Robledo and Ham-Kucharski (2005: 4–7) there are four disorders commonly categorized as being on the autism spectrum. These include:

- **Classic autism:** When children are diagnosed with classic autism, this means that they display significant delays in three specific areas, namely an inability to form social relationships and/or the lack of what experts describe as a 'social reciprocity'; problems communicating their thoughts and feelings to others; and engaging in repetitive behaviours.
- **Asperger's Syndrome:** These children do not show any deficiency in the intellectual abilities or delays in language acquisition. However, the main area of concern is the social lives of these children: they struggle to interact with others and develop meaning relationships with those around them.
- **Pervasive Developmental Disorder Not Otherwise Specified (PDD-NOS):** Children who receive this diagnosis exhibit some of the behaviours associated with either classic autism or Asperger's, but miss a few significant others. In other words, the individual may show typical social difficulties associated with autism, but still have adequate or above average communication.



- **Fragile X Syndrome:** this is an inherited chromosomal abnormality that is sometimes mentioned as part of the autism spectrum. A person with this syndrome has a specific gene that is not able to produce a protein that the brain needs to be able to learn. As a result, his or her mental faculties are usually severely impaired, and his or her moods are difficult to regulate.

However, Exhorn (2005: 16–27) and Stone (2006: 7–9) elaborate on Robledo and Ham-Kucharski's (2005: 4–7) categories by mentioning five disorders to be present on the autism spectrum. These include:

- **Autistic Disorder:** This disorder is characterized by a pattern of severe impairment in (1) difficulties interacting with others in a reciprocal way, (2) impaired language and communication skills, and (3) a repetitive and restricted range of interests and activities (Stone, 2006: 7). Exhorn (2005: 17) considers the most common early symptoms of autistic disorder to be “a lack of eye contact, a lack of pointing, and a lack of responding”.
- **Asperger's Disorder:** Children with this diagnosis tend to have average or above average intelligence and typical or advanced language skills, but have social impairments and restricted, repetitive interests. Exhorn (2005: 17) comments that this disorder can often mistakenly be referred to as higher functioning autism, with the main difference being that a child diagnosed with Asperger's Disorder will have strong language skills, which is not a component of Autistic Disorder.
- **Rett's Disorder:** This disorder is very rare, affecting almost exclusively girls. Children with this disorder develop normally in early infancy, but then begin to lose their skills in different areas of functioning. During this phase of regression, the child will show symptoms similar to those seen in Autistic Disorder. This disorder does have an identified genetic cause: an abnormality of a gene on the X chromosome. Rett's Disorder is progressive and will worsen over time (Stone, 2006: 8).



- **Childhood Disintegrative Disorder (CDD):** This disorder is also considered very rare, being 100 times less common than Autistic disorder. According to Exhorn (2005: 23) the “onset of CDD is later than that of Autistic Disorder – between three and five years old ... children generally develop typically and then experience marked regression in communication, social interactions and everyday functioning. Other traits of Autistic Disorder may be present, such as hand flapping or other repetitive behaviour”.
- **Pervasive Developmental Disorder-Not otherwise Specified (PDD-NOS):** This is sometimes referred to as atypical autism, and Exhorn (2005: 26) states that this diagnosis means that “children show some but not all of the criteria for Autistic Disorder, Asperger’s Disorder, Rett’s Disorder, or CDD”.

The information given by the previous three authors, with regard to the different disorders, definitely overlaps a great deal but there is also added information from Exhorn (2005) and Stone (2006). Table 1, given by Stone (2006: 10) gives a good overview of the different disorders and their typical characteristics.

**Table 2: Characteristics of Autistic Spectrum Disorders**

Characteristics	Autistic Disorder	Asperger’s Disorder	Rett’s Disorder	CDD	PDD-NOS
Social Impairment	X	X	X	Xb	X
Language and communication disorder	X		X	Xb	Xa
Repetitive interests and activities	X	X		Xb	Xa



Average intelligence		X			
Onset prior to 36 months	X		X		
Period of normal development followed by loss of skills			X	X	
Relative impairment	Variable	Milder	More severe	More severe	Milder
Relative prevalence	Higher	Intermediate	Lower	Lower	Higher

**Note: a At least one of these two features must be present**

**b At least two of these three features must be present**

Robledo and Ham-Kucharski (2005: 27–42) consider the following to be some of the manifestations of autism:

- Lack of eye contact
- Inability to read/recognize facial expressions
- Lack/absence of verbal communication
- Inappropriate play
- Increased aggression towards others or him/herself
- Unusual behaviour such as echolalia, ‘stimming’ and perseveration
- Associated disorders/problems: sensory integration, tactile, vestibular and proprioceptive dysfunction.



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The Indiana Resource Centre for Autism (2006) describes the following diagnostic criteria for autistic disorder, according to DSM-IV:

- A. A total of six (or more) items from (1), (2), and (3), with at least two from (1) and one each from (2) and (3).
1. qualitative impairment in social interaction, as manifested by at least two of the following:
    - a. marked impairment in the use of multiple nonverbal behaviours such as eye-to-eye gaze, facial expression, body postures and gestures to regulate social interaction
    - b. failure to develop peer relationships appropriate to development level
    - c. a lack of spontaneous seeking to share enjoyment, interests or achievements with other people
    - d. lack of social or emotional reciprocity
  2. qualitative impairments in communication as manifested by at least one of the following:
    - a. delay in, or total lack of, the development of spoken language
    - b. in individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others
    - c. stereotyped and repetitive use of language or idiosyncratic language
    - d. lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level
  3. restricted repetitive and stereotyped patterns of behaviour, interests, and activities, as manifested by at least one of the following:



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- a. encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus
  - b. apparently inflexible adherence to specific nonfunctional routines or rituals
  - c. stereotypes and repetitive motor mannerisms
  - d. persistent preoccupation with parts of objects
- B. Delays or abnormal functioning in at least one of the following areas, with onset prior to age 3 years: (1) social interaction; (2) language as used in social communication; or (3) symbolic or imaginative play.
- C. The disturbance is not better accounted for by Rett's Disorders or Childhood Disintegrative Disorder.

The Autism and Pervasive Developmental Disorder Fact Sheet (2006) states that "communication problems (such as using and understanding language); difficulty in relating to people, objects, and events; unusual play with toys and other objects; difficulty with changes in routine or familiar surroundings; and repetitive body movements or behaviour patterns", can be considered some or all the characteristics observed in mild to severe forms of autism.

Frith (1989: 11) considers the following to be the diagnostic criteria of autism:

- Qualitative impairment in reciprocal social interaction;
- Qualitative impairment in verbal and non-verbal communication, and in imaginative play; and
- Markedly restricted repertoire of activities and interests.



The Autism Society of South Africa (2006) composed, as seen in Table 2, the following characteristics or criteria for the diagnosis of autism:

**Table 3: Criteria for diagnosis of autism**

CHARACTERISTIC	SPECIFIC BEHAVIOUR
1. Severe impairment in reciprocal social interaction (at least two of the following).	<ul style="list-style-type: none"> <li>• Inability to interact with peers;</li> <li>• Lack of desire to interact with peers;</li> <li>• Lack of appreciation of social cues; and/or</li> <li>• Socially and emotionally inappropriate behaviour.</li> </ul>
2. All-absorbing narrow interests (at least one of the following).	<ul style="list-style-type: none"> <li>• Exclusion of other activities;</li> <li>• Repetitive adherence; and/or</li> <li>• More rote than meaning.</li> </ul>
3. Imposition of routines and interests (at least one of the following).	<ul style="list-style-type: none"> <li>• On self, in aspects of life and/or</li> <li>• On others.</li> </ul>
4. Speech and language problems (at least three of the following).	<ul style="list-style-type: none"> <li>• Delayed development of speech;</li> <li>• Superficially, perfect expressive language;</li> <li>• Formal, pedantic language;</li> <li>• Odd prosody, peculiar voice characteristics; and/or</li> <li>• Impairment of comprehension, including misinterpretations of literal/implied meanings.</li> </ul>
5. Non-verbal communication problems (at least one of the following).	<ul style="list-style-type: none"> <li>• Limited use of gestures;</li> <li>• Clumsy/gauche body language;</li> <li>• Limited facial expression; and/or</li> <li>• Inappropriate expressions.</li> </ul>

Stone (2006: 12) states that autism can be of a different range, intensity, or frequency of symptoms, but it will always include atypical development in three primary areas: (1) social skills, (2) language and communication skills, and (3) repetitive and restricted behaviour. Stone (2006: 12–17) goes on to state specific examples of where an autistic child may exhibit impairment in the above mentioned areas.



(1) **Impaired Social Skills:** An autistic child **may not:**

- Smile in response to praise
- Respond when his/her name is called
- Initiate social interaction
- Show enjoyment in interactive or turn-taking games
- Imitate actions of adults, such as waving goodbye
- Join other children in play
- Show and interest in making friends

(2) **Impaired Language and Communication Skills:** A child with autism **may not:**

- Make eye contact with other people
- Express his/her needs or desire to others in conventional ways, such as reaching and vocalizing
- Use nonverbal gestures, such as nodding or shaking his/her head
- Look at other people's faces to seek information
- Engage in back-and-forth babble 'conversations'

(3) **Restricted Interests and Repetitive Activities:** A child with autism **may:**

- Engage in repetitive play activities, such as lining up toys or spinning objects
- Acting out repetitive movements, such as running in circles or flicking their fingers
- Showing prolonged visual interest in objects, such as flapping objects in front of their eyes or staring at mirrors or objects that spin
- Having overly focused interest in one object or activity, such as a fascination with boats or bugs
- Demanding rigid adherence to rituals and routines



A child with autism **may not**:

- Play with a variety of toys
- Use toys the way they are designed to be used
- Arrange toys in their intended scheme
- Show functional play with dolls, stuffed animals, or toy figures, such as feeding a doll
- Play with toys in a variety of ways

Exhorn (2005: 8–9) also gives a list of early indicators of autism. These include:

- The child does not babble, point, or make meaningful gestures by one year of age
- The child does not speak a word by sixteen months
- The child does not combine two words by two years of age
- The child does not respond to his/her name
- The child loses language or social skills
- The child avoids eye contact
- The child does not seem to know how to play with toys
- The child excessively lines up toys or other objects
- The child is attached to one particular toy or object
- The child does not smile
- The child seems hearing impaired at times

When looking at all the previous definitions/characteristics given, one is able to highlight the fact that there is some deficit with regard to communication and social interaction. However, the researcher feels that it is of importance to gain a better understanding of what these components, namely communication and social interaction, entail. These components will be used in the development of the measuring instrument for this particular study (see Addendum B).



According to Improving Verbal Communication (2006), communication involves both verbal and non-verbal communication. The article goes on to state that “words can be considered to contribute 7 % to the conversation; tone of voice 38 % and non-verbal cues 55 %”. About personal growth.com (2006) states that verbal communication involves “words, vocabulary, number and symbols and is organized in sentences using language”. The researcher understands verbal communication to involve speech, comprehension and expression, using vocabulary, as well as tone of voice and clarity of communication.

Non-verbal communication, as can be seen in the previous statement, contributes a great deal to communication. BBC Teaching English (2006) considers the following to be components of non-verbal communication:

- Body language, such as eye movements, facial expression, gestures, foot tapping.
- Use of space.
- Touch.
- Eye contact.
- Use of time, waiting, pausing.
- Tone of voice, volume, speed.
- Use of silence.
- Position of the body, stance
- Attentiveness/listening

Social interaction is defined by Social Behaviour and Interaction (2006) as being “the acts, actions, or practices of two or more people mutually oriented towards each other’s selves...they must be aware of each other...and it involves a mutual orientation”. According to Impaired Social Interaction (2006), an individual who struggles with social interaction will show “a lack of motivation; anxiety;



hopelessness; poor impulse control; disorganized thinking; distractibility/inability to concentrate; social isolation and a lack of self-esteem”. The Centre for the Study of Autism (2006) states that autistic individuals can be considered either “socially avoidant, thereby avoiding all forms of social interaction; socially indifferent, thereby not seeking any form of social interaction; and/or socially awkward, thereby trying to form social bonds but unable to”.

The researcher feels that the examples given previously regarding characteristics of autism give a good understanding of the actual behaviour that an autistic child will show on a daily basis. The examples also highlight the great difference between neurotypical and autistic children, which are focused on in greater detail in Chapter 4, showing the difficulty that an autistic child faces.

Stone (2006: 40) goes on to caution parents to not be under- or over-cautious. This was summarized by Stone (2006: 40) in Table 3, focusing on the ‘do’s’ and ‘don’t’ of early detection.

**Table 4: Do’s and don’ts of early detection**

<b>Do</b>	<b>Don’t</b>
Become familiar with the behavioural symptoms that are used to diagnose autism	Expect your pediatrician to make a diagnosis during a routine office visit
Be aware that the expression of symptoms can vary from child to child	Talk yourself in or out of the diagnosis on the basis of comparing your child to another
Observe your child’s social and communication skills across different	Jump to conclusions because your young child shows some repetitive behaviours or



situations and with different people	interests
Talk to your pediatrician and request an assessment as soon as you suspect symptoms of autism	Hold off on mentioning your concerns to the pediatrician if you see a pattern of impaired social, communication, and play skills

From the researcher's point of view, Table 3 highlights the many challenges in identifying and diagnosing autism. Each child is unique and will respond differently and will develop at later stages, making it difficult to identify the characteristics as linked to autism. However, the researcher strongly believes, through her own professional experience with autistic children that the most important thing about this disorder is early detection in order to commence treatment as soon as possible. Baron-Cohen and Bolton (2002: 14) concur with this statement, writing that "an early diagnosis offers the hope that treatment can start before the condition has pushed the child too far off the normal course of development".

From all the above given characteristics, there are various symptoms identified in the behaviour of an autistic child. According to Williams (1996: 8–9), these symptoms include the following:

- An impairment in the ability to interact socially;
- Lack of communication, both verbally and non-verbally;
- Certain 'bizarre' behaviour/s;
- 'Bizarre' responses to sensory stimuli; and
- Impairment in the use of imaginary play.

The researcher's professional experience in working with autistic children leads her to suggest that, when looking at an autistic child, there are various obvious



signs that one will notice. In a more direct sense than the above given information, this may include:

- The child constantly being on his/her own by choice;
- The child not wanting to communicate with anyone, in any manner;
- The child displaying inappropriate behaviour in social settings, such as swearing, screaming or causing bodily harm to him/herself or others; and
- The child not displaying normal play behaviour for his/her age.

Autism can be considered a complex disorder, according to the researcher. Therefore, each individual case should be dealt with as such, and the professional/s should approach the case with flexibility and a good understanding of what autism may and could include. This especially refers to the symptoms, as they will definitely vary according to the degree of autism, as well as the individual child's responses.

When focusing on all the definitions and explanations given, there is a lot of focus on the autistic child's difficulties within the sphere of social interaction.

The researcher is of the opinion that it would be beneficial to focus on the Modified Checklist for Autism in Toddlers (M-CHAT), as this is a diagnostic tool that is often used for identifying autism and therefore brings all the characteristics and symptoms together. It included the following questions, to be answered by the parents of the child in question (Stone, 2006: 187–189):

- |    |  |     |    |
|----|--|-----|----|
| 1. | Does your child enjoy being swung, bounced on your knee, etc.? | Yes | No |
| 2. | Does your child take an interest in other children?            | Yes | No |
| 3. | Does your child like climbing on things, such                  |     |    |



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	as up stairs?	Yes	No
4.	Does your child enjoy playing peek-a-boo/ hide-and-seek?	Yes	No
5.	Does your child ever pretend, for example, to talk on the phone or take care of dolls, or pretend other things?	Yes	No
6.	Does your child ever use his/her index finger to point, to ask for anything?	Yes	No
7.	Does your child ever use his/her index finger to point, to indicate interest in something?	Yes	No
8.	Can your child play properly with small toys (e.g. cars or bricks) without just moving fiddling, or dropping them?	Yes	No
9.	Does your child ever bring objects over to you (parent) to show you something?	Yes	No
10.	Does your child look you in the eye for more than a second or two?	Yes	No
11.	Does your child ever seem oversensitive to noise (e.g. plugging ears)?	Yes	No
12.	Does your child smile in response to your face or your smile?	Yes	No
13.	Does your child imitate you (e.g., you make a a face – will your child imitate it)?	Yes	No
14.	Does your child respond to his/her name when you call?	Yes	No
15.	If you point at a toy across the room, does your child look at it?	Yes	No
16.	Does your child walk?	Yes	No
17.	Does your child look at things you are looking at?	Yes	No



- |     |  |     |    |
|-----|--|-----|----|
| 18. | Does your child make unusual finger movements near his/her face?                               | Yes | No |
| 19. | Does your child try to attract your attention to his/her own activity?                         | Yes | No |
| 20. | Have you ever wondered if your child is deaf?  | Yes | No |
| 21. | Does your child understand what people say?  | Yes | No |
| 22. | Does your child sometimes stare at nothing or wander with no purpose?                          | Yes | No |
| 23. | Does your child look at your face to check your reaction when faced with something unfamiliar? | Yes | No |

In order to score this questionnaire a parent would need to compare the answers he/she has given with the following:

- |         |         |         |        |         |         |
|---------|---------|---------|--------|---------|---------|
| 1. No   | *2. No  | 3. No   | 4. No  | 5. No   | 6. No   |
| *7. No  | 8. No   | *9. No  | 10. No | 11. Yes | 12. No  |
| *13. No | *14. No | *15. No | 16. No | 17. No  | 18. Yes |
| 20. Yes | 21. No  | 22. Yes | 23. No |         |         |

The total number of items that match (out of 23) need to be added as well as the total number that match the items with asterisks (out of 6). If the total number of matching items (out of 23) is 3 or higher or the number of items with asterisks that match (out of 6) is 2 or higher, then the child is considered at risk.

If it is identified that the child is at risk, then he/she needs to go for a further evaluation, as the scoring on this scale does not determine whether the child is autistic or not, but rather if there is need for further evaluation.



Through gathering the characteristics and symptoms of autism, one can gather the great complexity and challenges of the disorder, for both the child affected and his/her significant caregivers. From the researcher's point of view it is a disorder that requires a great deal more attention, in order to assist the individuals affected. As can be seen in the following section, autism appears to be on the increase and is being diagnosed in many more children.

## **2.4 PREVALENCE OF AUTISM**

Until quite recently, autism was considered a rare disorder. However, the statistics show otherwise. As stated by The International Child and Youth Care Network (2006) "autism is four times more common than Cerebral Palsy and 17 times more common than Down Syndrome". The researcher found this comment quite surprising, as both Cerebral Palsy and Down syndrome appear to be so much more prevalent than autism.

As regards the respective impacts of autism on males and females, it is documented in most research that autism affects males four times more than females. The Autism and Pervasive Developmental Disorder Fact Sheet (2006) postulated that autism is "four times more common in boys than in girls". Aarons and Gittens (1996: 17) reiterated this, stating that "males with autism tend to outnumber females by three or four times", as does the International Child and Youth Care Network (2006), which comments that autism affects four times as many boys as it does girls.

On an international level the statistics on autism have changed or increased dramatically over the past few years. According to Autism Society of America (2006) "autism is the most common of the Pervasive Developmental Disorders, affecting an estimated 1 in 166 births". It goes on to state that "every day, fifty families in America discover that their child has autism". Science News (2006),



states the same, remarking that “1 in every 166 people is affected with autism...the rate of people being diagnosed with autism has increased substantially over the past two decades”. The National Alliance for Autism Research (2006) states that “the prevalence of autism spectrum disorder has significantly increased from approximately four in 1000 in the early 1990’s to as many as one in every 166 births today”.

The National Alliance for Autism Research (2006) goes on to state that “autism is the second most common disability, next to mental retardation”. The New England Center for Children (2006) considers autism to be “the third most common development disability, following mental retardation and cerebral palsy, although autism is the fastest-growing developmental disability”. The growth of autism spectrum disorder in America in the 1990s was 172%, according to The New England Center for Children (2006), and there are 1.77 million cases of autism in America, with a new diagnosis being made every twenty minutes (Exhorn, 2005: 77). As regards statistics, The New England Center for Children (2006) states that “autism occurs in 1 – 2 or more of every 500 births and 3 – 4 times more often in boys”. Exhorn (2005: 75) concurs with this statement, writing that “the overall ratio of boys with ASDs (Autism Spectrum Disorders) to girls with ASDs is 4:1. Dr Lorna Wing (in Exhorn, 2005: 75) found that among people with Asperger’s and high-functioning autistic disorder, the ratio of boys to girls is 15:1.

On a national level there has also been a large increase in the number of children diagnosed with autism. According to Autism Western Cape (2005) “autism affects 1 in 158 South African children under the age of six years”. Autism South Africa (2006) concurs with this, stating that “autism is on the increase and is now considered to affect approximately 1 per 158 children under the age of 6 years”.



The researcher is of the opinion that the above comments highlight the alarming increase of autism on both an international and national level. However, as The National Alliance for Autism Research (2006) states:

The debate over the actual statistics has not been solved to anyone's satisfaction and it only adds fuel to the fire as cause and treatments are considered. Further, the lack of a consensus of these numbers only divides the Autism community more and without unity, the goals of finding the cause and treatment slip further away.

The researcher feels that this statement only serves to highlight the increasing urgency for further research and greater support for the individuals, and their families, who are coping and living with the disorder every day. Although the researcher understands that one should be aware of the statistics relating to autism, she believes that the focus should rather be on the causes of the disorder, leading to the development of more appropriate and beneficial treatments for the individuals affected.

## **2.5 CAUSES OF AUTISM**

The researcher is of the opinion that the information gathered on the causes of autism can be considered incomplete. This is because research is still being conducted in various fields to gain a better understanding in this area. Aarons and Gittens (1996: 19) best describe all the factors that could contribute to the onset of autism, in the following statement: "For autism to develop, brain damage has to occur in the setting of a genetic predisposition ... the causation of autism which is likely to be heterogeneous, arises when a number of quite common facts coincide".

When looking at the causes of autism, the various authors give varied opinions of the source or beginnings of the disorder. The researcher is of the belief that it is



important to look at all the different theories in order to gain a deeper and overall understanding of what the causes of autism may be. Therefore the researcher has categorized the literature, focusing on genetics, pregnancy/birth, parenting and neurological causes.

### **2.5.1 Genetics**

The first and most obvious cause of autism could be that of genetics. According to Attwood (1995: 141), Hans Asperger mentioned the “ghosting or shadow of similar characteristics in the parents (particularly fathers) of the children”. Aarons and Gittens (1996: 17) state that “autism is highly heritable ... there is an autism ‘phenotype’”. Frith (1989: 77) wrote that, in a study done, approximately two percent of siblings of autistic children are found to be autistic, which is 50 to 100 times higher than that of the population in general.

According to Autism.net (2006) “autism may result when a child with a genetic susceptibility is exposed to one or more of a number of environmental insults resulting in a series of dysfunctional interactions between Genes and Nutrients. This can happen during pregnancy or after birth”.

The National Alliance for Autism Research (2006) states that “there is a strong genetic component or disposition to autism spectrum disorders”. Robledo and Ham-Kucharski (2005: 25) agree with this, stating that “there’s a strong genetic component to the developmental disorder (autism)”.

It is important to note that the genetic connection is not merely referring to autistic parent/s having an autistic child, as this is highly unlikely, but rather various different disorders being present that seem to have a link with autism. These disorders can include speech disorders, learning difficulties and other minor cognitive disabilities (Aarons & Gittens, 1996: 17). The researcher is of the



opinion that parents are often in denial when making any connection between themselves and their child with autism.

Baron-Cohen and Bolton (2002: 29) state that “about 2 or 3 per cent of brothers and sisters also develop autism. This rate is considerably higher than what would be expected from chance alone, and indicates that autism does indeed run in families”. The authors go on to state that “this finding alone does not give any clue to the cause of this family pattern, but it does give some proof that genetic factors are involved”.

The research on this specific cause, however, can be considered inconclusive, although there do seem to be tangible links between the genetic heritages of the autistic child.

### **2.5.2 Pregnancy/birth**

Frith (1989: 78–79) states that “the incidence of prenatal hazards in autism is astonishing high...significantly more hazards of pregnancy and birth are present in autistic than in normal children”. Attwood (1995: 142) wrote that three potential causes of autism are recognized, namely “genetic factors, unfavorable obstetric events and infections during pregnancy or early infancy that affect the brain”.

Robledo and Ham-Kucharski (2005: 22) state that “premature babies are birthed with neurological problems, and are unable to control their body temperature, or even take their first breath unassisted...it’s possible that some of their (autistic child’s) neurological challenges can be attributed to being born too soon”.

Autism.net (2006) states that “research over the last 20 years has suggested a relationship between maternal diet and the birth of an affected infant, and recent evidence has confirmed that folic acid, may prevent the majority of neural tube



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defects”. However, Robledo and Ham-Kucharski (2005: 24) comment that no direct correlation between folic acid and autism has as yet been proven.

Baron-Cohen and Bolton (2002: 31) state that “pregnancy and birth problems are more common in children with autism than one would otherwise expect”. They give the following ‘risk’ factors which have been reported in association with autism:

- Mothers above 35 years old at the time of the child’s birth;
- Birth order (first or fourth or later-born children may carry a slightly higher risk);
- Medication during pregnancy;
- Meconium (the first stool of the infant) was present in the amniotic fluid during the labour;
- Bleeding between the fourth and eight month of pregnancy; and
- A ‘rhesus incompatibility’ between the mother’s and the child’s blood group.

However, Baron-Cohen and Bolton (2002: 32) do state very clearly that “these facts by themselves may not cause autism, but they may be part of the cause in some children”.

There is not a great deal of information with regard to difficult pregnancy/birth causing autism. However, the few authors that do mention it provide valuable information, which should be considered.



### **2.5.3 Parenting**

Aarons and Gittens (1996: 15) explain that initially there was a belief that parents were at fault, not providing enough warmth and affection for the child. This idea was disregarded. However, another similar idea arose at a later stage, stating that a breakdown in the bonding process between the child and the parent had led to the development of autism, which therefore also leads to an opportunity for a cure (Aarons & Gittens, 1996: 15). This idea was also disregarded. Attwood (1995: 144) comments on these beliefs, stating that “a belief that must be discouraged is that autism is a consequence of inadequate parenting, abuse or neglect”.

Baron-Cohen and Bolton (2002: 26) state that the view that poor parenting caused autism is often referred to as the “psychogenic theory” of autism, and “parents will be relieved to hear that it is entirely unsupported by any evidence”.

The National Alliance for Autism Research (2006) also comments on this, stating that “autism is not caused by emotional trauma”.

The researcher is in agreement with the above statement, but is of the opinion that parent/s are responsible for the quality of life of the child once autism has been diagnosed. Many parent/s appear to be in denial or constantly searching for the ‘miracle’ cure. This is in no way beneficial for the child and can cause a more severely affected and unhappy child.

### **2.5.4 Infection/medical conditions**

Baron-Cohen and Bolton (2002: 33) state that “as well as genetic and birth of pregnancy factors, infections that damage the brain during pregnancy or childhood are also associated with autism”.



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The infections that have been reported in association with autism are (Baron-Cohen and Bolton, 2002: 33):

- Rubella (German Measles)
- Cytomegalovirus (CMV)
- Herpes encephalitis

Baron-Cohen and Bolton (2002: 28) go on to document medical conditions that can damage the nervous system and can therefore be considered the cause of the child's autism. These include:

- Genetic conditions: Fragile X syndrome; Phenylketonuria; tuberous sclerosis; Neurofibromatosis; other chromosomal anomalies.
- Metabolic conditions: Abnormalities of purine synthesis; abnormalities of carbohydrate metabolism.
- Congenital anomaly syndromes: Cornelia de Lange syndrome; Noonan syndrome; Coffin Siris syndrome; Williams syndrome; Biedl-Bardet syndrome; Moebius' syndrome; Leber's amaurosis.

This list contains some conditions which are "genetic, biochemical and viral" (Baron-Cohen & Bolton, 2002: 29). However, it is again important to stress that not all those who have autism have had these particular medical conditions, and indeed not all with these conditions develop autism (Baron-Cohen & Bolton, 2002: 29).

Again, in the researcher's view, the evidence to support the above causes of autism is not conclusive but should be seriously considered.



### 2.5.5 Neurological causes

Aarons and Gittens (1996: 19) explain that “it seems very likely that brain damage or dysfunction is present in autism in all its manifestations...areas of interest include the right hemisphere, limbic system and cerebellum”. Trevarthen, et al. (1996: 49) postulated that:

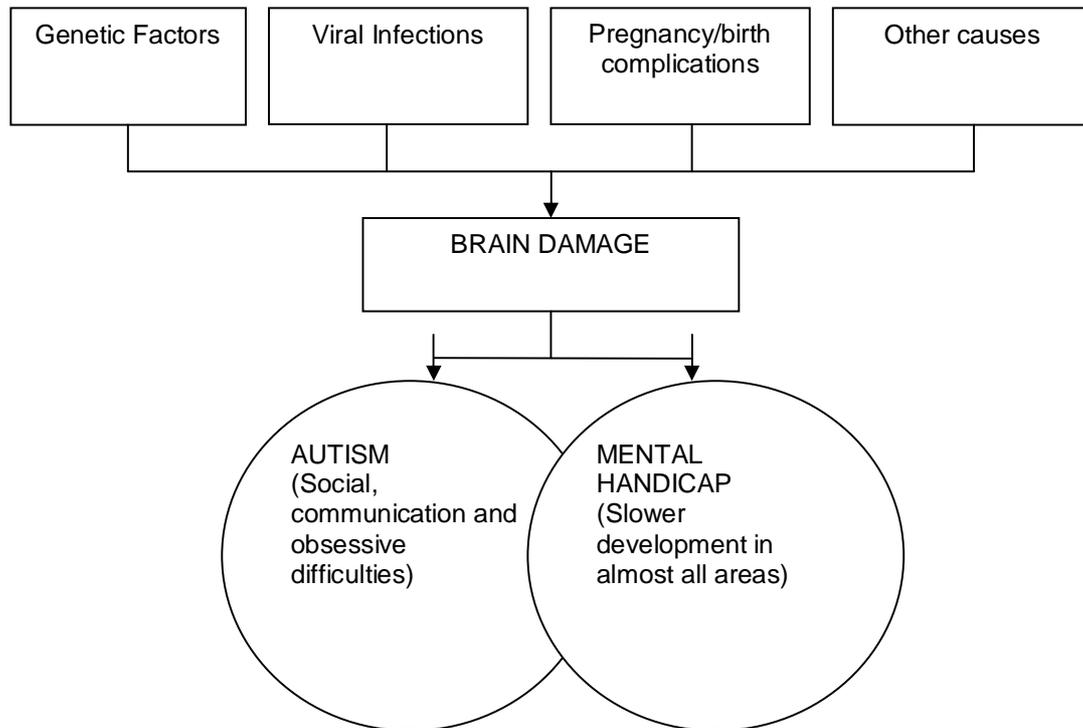
The evidence is now overwhelming that a prenatal fault in brain development can cause autism ... this can be caused in a variety of ways, such as by a fault in genetic instructions for formation of specific systems in the brain, or an infection or toxic chemical influence that impinges on the same processes ... in nearly every case of autism evidence of an abnormality in the brain can be found.

Baron-Cohen and Bolton (2002: 35) write that “the assumption is that in all children with autism there is some (possibly subtle) brain damage. When none can be found, it is assumed that this is because our tools for examining the brain are still too crude”.

### 2.5.6 The final common pathway model

Baron-Cohen and Bolton (2002: 33) document the model, known as the *final common pathway*, in order to try and solve the puzzle of the causes of autism. In this model it is postulated that a combination of factors, such as genetics, viral infections, pregnancy/birth difficulties and other problems cause brain damage to some extent in an individual. This in turn leads to the development of either autism or mental retardation, depending on where the damage occurs in the brain. There is obviously also an overlap between autism and mental retardation (Baron-Cohen & Bolton, 2002: 33–34). This can be seen in Diagram 1. From the researcher’s point of view, Diagram 1 gives a clear overview of the possible causes of autism. The researcher is of the opinion that the focus on autism, and particularly its causes, is definitely on the increase. With regard to the neurological causes, as can be seen in all the previous statements, the focus

seems to be increasing and the researcher is certain that within the near future a lot more information will be made available.



**Diagram 1: The final common pathway to autism**

All the above causes of autism should be taken into serious consideration when undertaking a study of autism, working with, or living with autistic individuals. All these causes have a value and although a great deal of research still needs to be done in this regard, the causes that are mentioned can be of assistance.

Having looked at the possible causes of autism, it is necessary to look at the treatment options that are currently available to autistic children.



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## 2.6 TREATMENT OF AUTISM

There have many treatment plans and programmes developed for autism, particularly over the past few years. Exhorn (2005: 104) states that it is important that individuals who are dealing with the disorder are aware of the treatments that are available.

Exhorn (2005: 104–114) lists the following treatments as standard treatments and interventions.

- **Applied Behavioural Analysis (ABA):** This treatment methodology is based on theories of operant conditioning by B.F. Skinner. It requires 40 hours of treatment a week and can therefore be considered intensive treatment. It is supported by more scientific research than any other treatment for ASDs and is considered very effective. ABA uses different procedures to teach new skills to children, using a reward system to motivate and reinforce certain behaviours in children while they are learning new skills and behaviours.
- **Floortime:** This is an intensive one-on-one intervention that focuses on children's individual strengths and their relationships to others. It focuses on helping children learn the building blocks of relating, communicating, and thinking. It helps children master interpersonal, emotional, and intellectual skills.
- **Medication:** There is no medication that is able to 'cure' autism, but there are a number of medications that can be used to alleviate specific symptoms associated with autism. Medication can be used to treat behavioural problems, attention disorders, anxiety, and depression. Research has shown that medication can reduce hyperactivity, impulsivity, aggression, and obsessive preoccupations.



- **Occupational Therapy (OT):** OT can be used to help children with autism to achieve competence in all areas of their lives, including self-help, play, socialization, and communication. OT also provides support for children with autism who have difficulty with sensory, motor, neuromuscular, and/or visual skills.
- **Physical Therapy:** This treatment is prescribed to enhance the child's physical ability. Some children with autism have low muscle tone, poor posture, poor balance and poor coordination, and physical therapy can treat these impairments by providing passive, active, resistive, or aerobic exercise as well as training in functional and developmental skills.
- **Sensory Integration Therapy:** The goal of this treatment is to help children absorb and process sensory information better. Sensory integration therapy focuses on the basic senses: tactile (touch), auditory (hearing), and vestibular (sense of movement), and proprioceptive (body position).
- **Social Skills Training:** This can include social skills groups, one-on-one social skills therapy, peer modeling, and video modeling. The goal is to help children with autism to make friends, establish relationships, and have appropriate social interaction. Within the treatment the facilitator can use role-playing, discussions, games, and activities to develop social understanding, teamwork, empathy, and improved interpersonal relationships.
- **Speech and Language Therapy:** This helps a child to communicate more effectively both verbally and nonverbally, using words and/or body language. The sessions may incorporate language-based exercises, games, and activities, assisting children in forming words or communication systems, process information, and express themselves. Children are also taught the pragmatics of language (how to use language).



- **TEACCH (Treatment and Education of Autistic and Related Communication Handicapped Children):** TEACCH is a structured teaching approach that does not rely on one specific technique; it is a complete programme of services that incorporates several techniques and methodologies. The goal is to help people with autism learn functional skills to reach their full potential so they may live more effectively at home, at school, and in the community.

Baron-Cohen and Bolton (2002: 67) mention many of the same treatments, but also include the following:

- **Music therapy:** This therapy can be used to encourage communication as well as teach appropriate social skills, such as turn taking. Music also has a very calming effect on many children with autism, and it is reported, according to Dancer (2003), that for some children singing is actually easier to understand than speech.
- **Holding therapy:** In this therapy parents are encouraged to literally hug their child for a long period, even if the child protests and tries to pull away. Using such forced holding techniques, the child eventually gives up resisting, and some parents report that the child begins to explore his/her parent's face and makes better eye-contact

Robledo and Ham-Kucharski (2005: 76–77) add the following to the list of treatments:

- **Auditory Integration Therapy:** This therapy aims to assist autistic children in processing all the sounds they hear, aiming to showing improvement in learning and behaviour.



- **Hippotherapy:** This refers to therapeutic horseback riding, and activity that has proven to be beneficial to children with disabilities, including autism. The focus is not on teaching a child how to ride a horse; instead, the animal is used as a helper while the therapist and the child work on sensory and neurological challenges.

The researcher has just mentioned a few of the treatments available to children who are diagnosed with autism. There are many more, with new treatments being developed all the time. From the researcher's point of view this is greatly beneficial to children with autism as each child responds differently to treatment, and the more options that are available to these children, the more likely it is that there will be improvement and progress.

Having given a good indication of what autism is, looking at definitions and characteristics, as well as looking at the possible causes and treatment, it is now necessary to focus on the impact/effect that autism has on our society today.

## 2.7 SOCIAL EFFECT OF AUTISM

The diagnosis of autism in a child has an effect on the immediate family as well as society as a whole.

The National Alliance for Autism Research (2006) states that “few disorders are as devastating to a child and his or her family, as that of autism”.

Aarons and Gittens (1996: 88) state that “almost as soon as parents learn that their child may have autism, their thoughts inevitably turn to the future – what will the outcome be?” The effect that autism has on a family is almost incomprehensible. The families undergo a great deal of changes, which are documented by Braude (1999: 24–26) and include the following:



- **Reaction to changes in routine:** As has been previously stated, autistic children require the most rigid of routines. As soon as this routine is altered the child becomes unsettled. This is related to the insistence on sameness as one of the symptoms of autism.
- **Temper tantrums:** 50% of parents reported that their children exhibited temper tantrums when a change of environment occurred. This, according to the researcher, places a great strain on the parent/s and/or family to maintain an environment of sameness in order to decrease the likelihood of a temper tantrum.
- **Avoidance of physical contact:** Many autistic children tend to avoid any form of physical contact. This forms an essential part of the lives of many autistic children, although it does appear that when the child is approached sensitively, he/she is not totally averse to physical contact.
- **Social interaction:** Attwood (1995: 28) commented that autistic children might have an inability to interact with peers, as well as a lack of desire to interact with those around them. They may display socially and emotionally inappropriate behaviour.
- **Behaviour characteristics:** Many parents mentioned that their children displayed specific behaviour such as a dislike of bathing; food preferences; and/or mood swings and tics.

The researcher is of the opinion that all of the above behaviours place a great deal of stress on the family within its social environment. Each aspect, depending on the individual child, will vary in severity, and may even lead to the family avoiding social events/situations at all costs. The researcher is of the opinion that in the case where there are other siblings, the constant attention that is required by the autistic child and to his/her routine, could severely affect the sibling/s. The impact of autism on the family will be discussed further in Chapter 3.



In society there is also a great increase of pressure owing to the ever increasing number of children being diagnosed with autism. The researcher is of the belief, through professional experience, that in South Africa, as well as various other third world countries, the support for parents of and children with autism is limited. This is apparent when a comparison is made with the support available in other countries such as America and Britain, which is greatly ahead of the support in this country. As regards support, the areas of society that will be impacted by the increasing number of autistic individuals include the economic, educational and professional sectors.

Within the economic sector there will need to be an increase in the amount of social funding available to providing the necessary support for autistic children and their families. Exhorn (2005: 78) comments that “autism has been called the fastest growing developmental disorder, and its impact is reflected in the amount of money that is spent on research, treatment, and education”. In America, according to Exhorn (2005: 78), “the annual cost of ASDs (Autism Spectrum Disorders) is \$90 billion”.

In society the funding will be needed for:

- Education,
- Training of professionals and parent/s,
- Therapy and treatment for children and their families,
- Facilities for schooling, aftercare, and treatment.

In the educational sector there will need to be a substantial increase in the number of educational facilities available for autistic children. This includes the need for normal schooling in the morning as well as aftercare facilities for the afternoons and weekends, if necessary.



The schooling environment for an autistic child needs to be significantly different to that of a neurotypical (non-autistic) child. Baron-Cohen and Bolton (2002: 60) make the following remark in this regard: “highly structured teaching programmes have been claimed to produce the greatest gains”. Baron-Cohen and Bolton (2002: 61) go on to state the reasons for this, which include (1) social problems in autism are such that, if a teacher is not actively initiating interaction and being directive, a child with autism may simply drift away, (2) the highly structured approach starts from the assumption that every task should be broken down into simple and clear steps, with each goal clearly defined ... children with autism take to such a methodical approach, (3) highly structured teaching works with children with autism because they seem to prefer predictability.

The researcher is aware of the possibility of an autistic child being placed in a mainstream school, which would be ideal in most cases, but this is almost always not possible, owing to the individual child’s challenges and difficulties.

In the professional sector, particularly professionals working with children and families, there will need to be an increase in the number of professionals who are trained in educating and/or treating children with autism. Autism is a lifelong disorder, so treatment is always long term, and will change as the child develops and grows. An autistic child also needs to be placed in a more controlled and smaller educational setting, with a teacher and assistant needing to be present. Baron-Cohen and Bolton (2002: 61) comment that “if children with autism are not given individual attention, they may revert to their own repetitive activities or solitary existence”. The authors mention that “to maintain their attention sufficiently for learning to occur, a ratio of at most 3 pupils to 1 teacher seems appropriate”. Therefore the number of professionals needed to assist an autistic child and his/her family is substantial.



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All the above information indicates that besides the everyday challenges that are faced within the home of an autistic child, there is the added pressure faced when dealing with the autistic child within his/her society and the impact that autism has on our society.

## **2.8 SUMMARY**

Autism is a complex and challenging disorder that is being diagnosed in more and more children in our society. This may be attributed not only to an increase in actual numbers of children affected by autism, but also to increased awareness and more appropriate diagnosis.

This chapter aimed to provide the reader with a greater understanding of autism. This involved looking at the various definitions given for autism, as well as the origins, characteristics, prevalence, and social impact of autism. The purpose of documenting all of this information is to create a good theoretical basis for this study.

This literature study has given the researcher a great deal of information about Autism Spectrum Disorder. Most important, perhaps, is the fact that, although there is a lot of material available on autism, there still seems to be great confusion about what autism includes.

This leads the researcher to the conclusion that a study of this particular nature could be of great benefit to those who are affected by autism, either directly, or indirectly, particularly in providing much-needed support for these individuals. As Dr Ed Yazbak, a retired American Pediatrician, states in an Autistic Society (2006) article, "the statistics (of autism) tell us, not only that there has been a huge increase in autism rates in the last 20 years, but also that this increase is



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not stopping". Therefore, in the researcher's opinion the need for information and support with regard to autism is only going to increase.

The principal goal of this study is to develop and evaluate a play technique programme for autistic children in middle childhood. In the next chapter, therefore, the researcher will look at middle childhood, focusing particularly on the developmental differences between neurotypical and autistic children. Once the reader has gained a good understanding of these differences, the researcher will then discuss the impact, of autism in middle childhood, on the family unit, looking at the parents and siblings involved. This is necessary to highlight the difficulties that families with an autistic child are facing and to point to the dire need for support.