Behavioural challenges in people with intellectual disability: A comparison between those with a history of sexual assault and those without

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: Signed by candidate Date: 2 6/03/2010

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Abstract

Literature suggests that challenging behaviour is one of the most common problems associated with intellectual disability. The aim of this research was to compare the behaviour of two groups of people with intellectual disabilities, depending on whether they had a history of a sexual assault or not, to determine whether there was a difference in their presentation and severity of challenging behaviours. Following a review of relevant literature, the study had a one-directional hypothesis that people who had experienced a sexual assault would present with increased and more severe challenging behaviours than those with no sexual assault history. 54 participants who are carers for people with intellectual disability were interviewed using the Aberrant Behaviour Checklist-Community (ABC-C). All participants were identified and accessed through Cape mental health Society, a non-governmental organisation that supports psychiatric patients and people with intellectual disability. 27 of the people with intellectual disability had a history of sexual assault and the other 27 had no known history of sexual assault. The ABC-C, a questionnaire with five subscales, namely Irritability, Lethargy, Stereotypical behaviour, Hyperactivity, and Inappropriate speech, was used to assess the presence of challenging behaviours in the intellectually disabled people they were caring for. The ABC-C has been used in previous studies and has a well established validity and reliability. The performance of the two groups was quantitatively analysed using the Mann-Whitney *U* statistical test. The results showed that intellectually disabled people who had been sexually assaulted had more challenging behaviours, and these challenging behaviours were more severe than those who did not have a sexual assault history. This was specifically so on three of the subscales: Irritability, Lethargy and Hyperactivity. There were no significant differences between the two groups in their presentation and severity of aberrant behaviour on the Stereotypy and Inappropriate speech subscales. The findings suggest that a history of sexual assault is associated with an increase in, and the presence of more severe challenging behaviours, in people with intellectual disabilities. This supports the argument that intellectually disabled people do react to trauma, and that sexual assault may have adverse effects on their well-being and particularly on their behaviour. The results will hopefully help caregivers of intellectually disabled people to recognise that challenging behaviours may be an expression of trauma.

Keywords: Intellectual disability; sexual assault; behaviour: irritability, lethargy, stereotypy, hyperactivity, and inappropriate speech.

Chapter 1 – Introduction

Intellectually disabled people are a marginalized population. Although they constitute about 2% of the general population (Cooray & Bakala, 2005), there is very little research that has been conducted on them compared to research of non-disabled people (Arthur, 2003). This is the case worldwide. In particular, there is a paucity of research about intellectually disabled people's reaction to trauma in the South African context. Research focusing on the effects of trauma is important because people with intellectual disabilities may respond differently to the general population. Additionally, in order to create and establish appropriate interventions, there is a need for detailed research about the impact of trauma. This thesis will be adding to the body of knowledge around this phenomenon by investigating whether there are behavioural manifestations following a sexual assault, in people with intellectual disabilities living in South Africa.

This thesis will begin with a review of the relevant literature around intellectual disability and sexual trauma. Chapter 2 commences with a discussion around the evolving terms that have been used to describe intellectual disability. It then explores the definition of intellectual disability, and some understandings of its aetiology. This is followed by an explanation of some of the associated features of this phenomenon, and specifically looks at mental illness in people with intellectual disabilities, as well as their reaction to trauma. The chapter then focuses on sexual assault trauma, starting with South African statistics on violent crimes and sexual assault. It then looks at the impact of sexual assault on the general population, and then on people with intellectual disabilities with particular attention given to literature on the impact of this trauma on behaviour. The chapter ends with a brief summary, and a statement about the aims of this particular study.

Chapter 3 will look at the methodology of the study. A description of the study's design and the hypothesis being tested will be given. This will be followed by details about the site of the study and the participants. Particulars about the questionnaire that was used will then be

given, including the various subscales that it measures. The procedures that were followed will then be elaborated on, as well as information on how the data was analysed and ethical considerations that had to be taken into account.

The findings of the study will be presented in Chapter 4. Firstly, participants' results on the overall questionnaire will be given. Then their performance in the various subscales will be presented. All the results presented will include means, medians and standard deviations of both groups performance, a graphical presentation of these using Box and Whisker plots, as well as the significance of these results and the corresponding effect sizes. The chapter ends with a brief summary of all the results.

In Chapter 5, the results given in the previous chapter will be discussed with reference to previous study findings and the literature reviewed in Chapter 2. There will be a discussion of results from each of the separate subscales following a brief summary of each subscales' findings. The next part of the chapter will be the conclusion, starting with an overview of the entire study. Conclusions will be drawn and the implications of the study will be discussed. The chapter will end with reflections of the whole research process, some of the limitations identified and recommendations for the direction that future research may take.

Chapter 2 - Review of the literature

This chapter will provide a review of the relevant literature around intellectual disability and sexual trauma. It will begin with a brief discussion around the terms used to describe the phenomenon of intellectual disability, a definition of it, and its aetiology. This will be followed by a description of some of the associated features of intellectual disability, and how mental illness and trauma manifest in light of these characteristics. The chapter will then specifically look at the traumatic experience of a sexual assault. This will start with an exploration of the complexities of sexual assault, and will be followed by a brief overview on the sequelae of sexual assault in the general population. The next section will focus on the sequelae of sexual assault in people with intellectual disabilities, in particular challenging behaviours that may emerge in response to trauma. The chapter will end with a summary of this section, and an explanation of the aim of this research.

Intellectual disability

There have been several terms used to describe what this thesis will refer to as intellectual disability: some of the terms that have been used are mental retardation, mental handicap, learning disability, and developmental disability (Cooke, 1997; Hastings, Hatton, Taylor & Maddison, 2004; Lewis & Porter, 2004; Mattson & Sevin, 1994; Sinason, 1992). There are multiple reasons why terms describing people with this specific disability have evolved.

Some of the revisions of the term have been informed by socio-political contexts, for example Cambridge and Forrester-Jones (2003), who use the term intellectual disability, perceived as more respectful and sensitive to the fact that this is a particular, not an all-encompassing disability. Other revisions are because of increasing research, and more information on a phenomenon bringing different ways of understanding it and hence different descriptions of it. An additional reason is closer scrutiny of the implications of terms used to

describe groups of people and several authors (e.g. Watermeyer 2000) have understood impairment as a structural or anatomical defect, and disability being physical and social limitations arising because of the impairment. An example is blindness being an impairment, while the lack of access to written information being the disabling factor to the blind person i.e. the disability (French, 1993). However, the difference between the two is more complex than what is described here.

Sinason's (1992) understanding of the constantly changing terms is that a new term attempts to bring hope to the painful experience of disability that is described. In other words, as a term becomes more familiar and understanding of what it intends to describe grows, it becomes associated with issues related to the phenomenon, in this case painful experience of disability, and a new term that is not yet associated with painful experiences around the phenomenon emerges as a way of providing a sense of hope. However, as the new term becomes corrupted too, a need for a new term arises. This painful experience will be explored further in the definition of intellectual disability and the associated features of people living with intellectual disabilities.

This thesis will use the term intellectual disability, as it is felt to be more respectful and one of the more recent terms that is being used.

Definition of intellectual disability

The core definition of intellectual disability involves deficits in both intellectual and adaptive functioning. The American Association for Mental Retardation's (AAMR) manual model of intellectual disability considers an individual's intellectual abilities, adaptive behaviour, and their community life: participation, interaction and social roles (Carr, 2006). The World Health Organisation's (WHO) international classification of functioning, disability, and health functioning, takes into account an individual's health, body functioning and structures, activity limitations, participation in community life and environmental barriers (Carr, 2006). The Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition Revised (DSM-IV

TR) defines people with intellectual disability as those whose level of intellectual functioning, as measured on a standardized test, is below 70, and who have significant limitations in adaptive functioning, such as limited communication, self-care and social/interpersonal skills (APA, 2000). There are different categories of intellectual disability: mild, moderate, severe and profound, with the classification depending on the individual's level of intellectual functioning.

There are some controversies about the use of standardized tests (e.g. IQ tests) to assess intellectual functioning. Some of these include debates that they are culturally biased, their results are misused, and that they only measure one aspect of intelligence (Sattler, 1992). Despite this, they are still useful in identifying vulnerabilities and determining an individual's level of intellectual functioning, and ensuring that they receive services they need, for example if they are deemed to have an intellectual disability as their score is below 70.

Adaptive functioning is assessed using various instruments. A commonly used one is the Vinelands Adaptive Behavior Scales (VABS) (Sparrow, Balla, & Cicchetti, 1984), which involves assessment of deficits in the domains of Communication, Socialisation and Daily Living Skills, as well as motor skills and maladaptive behaviour. Communication encompasses both verbal and written skills, while Daily Living Skills include self-care skills such as the ability to bath and clothe oneself. Socialisation broadly refers to interpersonal relationships, and the person's interaction with their environment/community. The VABS is adapted from the Vinelands Social Maturity Scale (VSMS) and its underpinning theory is that intellectual disability should be viewed in terms of a person's social competence, level of independence, and responsibility (Oakland & Houchins, 1985), as it is in these aspects that there are deficits. Deficits in these aspects have an impact on the overall quality of life of a person with intellectual disability. Once again there are debates that arise about the use of a scale that was developed overseas, and there may be cultural issues related to its use in South Africa. There are however not many scales available locally, and these instruments have to be used and interpreted with caution.

Aetiology of intellectual disability

There are several theories of intelligence, which may help in understanding the aetiology of intellectual disability. They broadly fall into two categories: genetic/biological and psychosocial/environmental (Carr, 2006; Sattler, 1992). Genetic/biological factors refer to genes, health and organic structures, while psychosocial/environmental include factors such as nutrition and education; there is an idea that intelligence is inherited via genes, and their expression is dependent on the environment (Carr, 2006; Sattler, 1992).

Aman and Singh (1983; as cited in Sattler, 1992), explain various models of the aetiology of intellectual disability. One asserts that intelligence is normally distributed and intellectual disability is a natural occurrence of those at the lower end of the spectrum of this distribution. Another understands intellectual disability as a result of an organic condition which affects learning. A different model sees intellectual disability as an immature development where skills take longer to develop but eventually do so. An alternative understands intellectual disability as the result of environmental factors disrupting the learning process. An additional model views intellectual disability as an negative effect of environmental factors on the basic skills needed for learning. Sattler (1992) posits that the more severe the level of intellectual disability, the more likely that the aetiology is due to gene effects, chromosomal abnormalities, and brain damage, and higher ends of the intellectual disability spectrum being a result of normal gene/intellectual variation in the population.

Associated features of intellectual disability

The definition of intellectual disability is in itself the starting point of the painful experience of those living with intellectual disability. Dykens (2006) argues that it is a diagnosis based on negatives, and thus will have negative connotations attached to it. This is immediately clear in the case of the arrival of an intellectually disabled child and the impact of this on the parents who experience it as a trauma, before there is even a clearer manifestation of the disability (Sinason, 1992). There is a sense of loss for what could have been a healthy child (Sinason, 1992), and this feeling from the parents has a great impact on the disabled

individual, given the importance and impact of primary relationships on self-esteem and future relationships.

As a person with intellectual disabilities grows older, they become more aware of being different from others (Sinason, 1992), and this is another source of grief. In addition to this, Watermeyer (2000) explains how people with any kind of disability are used as a container for people's displaced feelings of vulnerability that are evoked by seeing those with a disability. The feelings that are projected onto the disabled person leave them with difficult emotions, which they are unable to process in part due to their cognitive deficits. This and other experiences give rise to what Sinason (1992) coins the secondary handicap, which is different from the primary handicap. The primary handicap is a result of the original structural, organic deficit, while the secondary handicap is due to, and a defense against the effects of the primary handicap on the individual and others around the individual.

Individuals around the person with intellectual disabilities are particularly important because they rely on others more than the general population due to the deficits in their adaptation skills (Allington-Smith, Ball & Haytor, 2002). They also have difficulties communicating, so one can only imagine the frustration they experience being unable to ask for what they require. It is one of the reasons why they may develop the secondary handicap, to defend against feelings of frustration and helplessness.

The secondary handicap may manifest in different ways. Although these may mimic some of the associated features of the intellectual disability they need to be examined as they may be an expression of mental illness, disturbing experiences or past trauma.

In the past, these have not been thoroughly examined due to lack of research in the intellectually disabled population. There are several reasons why there has not been a lot of

research conducted in this population. Some of them are because of limitations presented by the intellectual disability, and others are because of societal attitudes.

Reasons attributed to the disability are the cognitive and communication deficits that make it difficult to obtain consent for research, the inability of people with intellectual disability to initiate research about themselves, and their difficulty in communicating and hence contributing to research (Cameron & Murphy, 2006). Another issue that has recently been argued is the importance of more participative research methodologies in the field, which refer to methods that are more inclusive of and use people with intellectual disabilities as the source of information (Cambridge & Forrester-Jones, 2003; Cameron & Murphy, 2006). There are other ethical issues that arise and need to managed, such as the problems around gatekeepers and their ability to judge whether an intellectually disabled person would want to participate in a particular research, whether the research would be in their best interest and maintaining ongoing consent to the research (Lewis & Porter, 2004).

Societal attitudes are another reason why there is a paucity of research in people with intellectual disabilities, although this has been shifting in recent years, with increased research being conducted (Westcott & Jones, 1999). In the past, it was assumed that intellectually disabled people had limited understanding of what was happening around them, and therefore were not affected by it. For example, it was unthinkable that mental illness could co-occur with intellectual disability and there was a general belief that people with intellectual disabilities did not have the mental capacity to experience mental health problems, and manifestations of mental health problems were attributed to the disability (Hollins & Sinason, 2000; Matson & Sevin, 1994; Smiley, 2005). An example of this is the previously held assumption that because they did not understand the concept of death, they did not experience grief and bereavement (Harper & Wadsworth, 1993; Hollins & Sinason, 2000). Arthur's (2003) review of the literature found that there was little research on the emotional lives of people with intellectual disabilities for similar reasons. For people with intellectual disabilities, being a marginalized population also has implications in the sense that less funding may be available for research in this topic, as well as less awareness from

the general population who unless have personal experience with disability may not have much interest in it (Hollins, 2000). Psychiatrists and psychologists' limited training in the field of intellectual disability is another contributing factor (Hollins, 2000).

Intellectual disability and mental illness

Research conducted on people with intellectual disabilities has found that they do experience mental health problems, and may be even more vulnerable to them (Smiley, 2005). One study reported that 54% of their sample was identified as possibly, probably or definitely mentally unwell, with some individuals meeting the criteria for more than one mental disorder (Cooper, Smiley, Morrison, Williamson & Allan, 2007). Such high rates have been found despite difficulties in diagnosing mental disorders in intellectually disabled people using instruments developed and validated on people with at least average intellectual abilities (Cooray & Bakala, 2005).

Vulnerability to mental illness has been understood in part as a consequence of the intellectual disability. Contrary to the previously held assumption of their lack of understanding being a buffer against distress, the disability may actually be what exacerbates the illness and impact intellectually disabled people's ability to process distressing or traumatic events (Harper & Wadsworth, 1993). In addition, their communication difficulties make it difficult for them to express their distress (Mitchell & Clegg, 2005), and limited agency and inability to refer themselves for treatment (Hollins & Esterhuyzen, 1997). Recent studies show that trauma of any kind does have an impact on the psychological well-being of intellectually disabled people and it is necessary for more research on how psychological distress manifests in order to inform appropriate interventions.

Intellectual disability, challenging behaviours and trauma

About 10-15% of intellectually disabled people exhibit challenging behaviours (Emerson et al., 2001). It is one of the most common problems caregivers experience, and one of the most

frequent reasons for their referral to psychiatric/psychological services (Moss et al., 2000). Challenging behaviours reported in the literature range from aggression, destructive behaviour, self-injury, withdrawal, non-compliance, and sexually inappropriate behaviours (Emerson et al., 2001; Matson, Cooper, Malone & Moskow, 2008; Moss et al., 2000). Males are likely to exhibit challenging behaviours more than females, and the more severe the level of intellectual disability, the higher the likelihood of challenging behaviour (Moss et al., 2000). This suggests that their intellectual disability may be a reason for the presence of the challenging behaviour e.g. an inability to communicate with words results in them communicating through their behaviour. However, there are additional reasons that may explain the presence of challenging behaviour.

Hollins and Esterhuyzen (1997) assert that challenging behaviours may be linked to trauma. They found that there was increased irritability, lethargy, hyperactivity and inappropriate speech in a group of intellectually disabled adults who had experienced a bereavement compared to those that had not. The challenging behaviour was hence an expression of their loss which could not be communicated in a different and is thus not always a result of their cognitive limitations but an expression of mental distress. Some of the behaviours identified above have been incorporated into measurement tools designed to assess challenging behaviour in people with intellectual disabilities (e.g. in Hollins & Esterhuyzen, 1997; Sequeira, Howlins & Hollins, 2003). Lethargy and hyperactivity may be viewed as symptoms of classifiable mental disorders in the DSM-IV (APA, 2000), for example being psychomotor retardation and psychomotor agitation features of depression. Irritability is also a common symptom of depression.

Other challenging behaviours such as stereotypical behaviour like rocking, may be theorised as related to developmental arrest, hence the presentation of behaviours such as that seen in infants (Symons, Sperry, Dropik & Bodfish, 2005). Developmental delays have also been used to understand behaviours that are age-inappropriate and immature. However, some age-inappropriate behaviours such as sexualized behaviours, have also been linked to an experience of sexual assault (Sequiera et al., 2003).

There has been increasing interest and research of sexual assault in people with intellectual disabilities. This is in part due to research findings of the effect of sexual assault in the general population, the recognition that people with intellectual disabilities also experience distress, and the findings that some of the challenging behaviours they exhibit may be a result of an underlying mental distress or reaction to trauma. In addition to this, there is growing awareness of the vulnerability this population has to trauma of a sexual nature, an issue that is discussed further in the next section.

Sexual assault

The term sexual assault will be used in this thesis to encompass acts of a sexual nature such as rape, sexual abuse, inappropriate touching, and indecent assault.

South Africa is perceived to be an extremely violent society with statistics revealing high levels of crime, including those of a sexual nature (Hamber & Lewis, 1997). Some authors have attributed this to the era of Apartheid where violence was institutionalized, and subsequently undermined the country's moral and interpersonal fabric (Hamber & Lewis, 1997). Although statistics are available and will be given, on levels of violent crime and specifically sexual assault, it is important to understand that these are not 100% accurate.

Hamber and Lewis (1997) discuss how statistics do not reflect the extent or number of incidences, but rather look at patterns of reporting. An example of this is a Statistics South Africa (2000) survey that found that only half of people who said they had been raped had reported the case to the police. Furthermore, crimes such as domestic violence, spousal battery and abuse, are considered 'hidden violence' and not acknowledged or witnessed as much as other more public forms of violence (Hamber & Lewis, 1997). Someone known to the victim also usually perpetrates these forms of violence, and this is a complicating factor in terms of willingness and motivation for the victim to report the crime. The World Health Organisation report on violence and health (WHO, 2002) ascribed low report rates of sexual

violence to the victim's fear of being blamed, not being believed and mistreated, as well as feelings of shame. Bernard (1999) includes race as another factor which impacts on the response to abuse and how institutions such as the police which are viewed in a negative light, due to socio-historical contexts, may hinder reporting.

One unintentional factor that contributes to the inaccuracy of statistics is in the legal definitions of specific crimes. An example of this is sexual violence against men and boys being defined as sexual assault as previously, was no provision for that crime to be recorded as a rape. Statistics South Africa (2000: p.5) uses the following definitions for sexual violence crimes:

1. Sexual assault: "...unlawful and intentional application of force to another person, or making the person believe that such a force will immediately be applied, with the intent to commit a sexual act...".
2. Sexual abuse: "...unwanted physical invasion of an individual's body that is sexual in nature...".
3. Rape: "...having unlawful, intentional sexual intercourse with a woman without her consent...".

Although the new Criminal Law (Sexual Offenses & Related Matters) Amendment Act, No. 32 of 2007, now takes the above into account, current statistics are based on previous definitions that, for example, did not accommodate the rape of males, and may thus not be a true reflection of the status quo.

Statistics reveal that a third of South African women will be raped during their lifetime (Moffet, 2006). In the 2007 South African Police Services Report, the Western Cape reported 10% of the total number of rapes reported in South Africa. Earlier statistics in 1997 found that 55,000 South African women were raped in 1997, approximately 40% of these reported rape cases were of children under the age of 18 (Statistics South Africa, 2000).

Sexual assault and trauma

Although prevalence studies demonstrate that sexual assault is widespread irrespective of socio-economic status, ethnicity and cultural group (Petrak, 2002a), trauma in the general population only became a subject of enquiry and taken seriously when the Diagnostic and Statistical Manual-Third Edition (DSM-III) included it as a diagnostic category. Previously, Burgess and Holmstrom (1974; as cited in Petrak, 2002a) coined the term 'Rape Trauma Syndrome', following a longitudinal study on 109 child, adolescent and adult females to describe reactions to rape. It described physical, psychological, social and sexual effects (Petrak, 2002b). The study found that there was an acute response to the trauma of sexual assault as well as residual effects six years later (Petrak, 2002b). This term has since been encompassed by the diagnosis of Post-traumatic Stress Disorder (PTSD) (Petrak, 2002b).

PTSD is classified under the category of anxiety disorders in the DSM-IV (APA, 2000). It includes re-experiencing of the trauma, hyperarousal, and numbing and dissociative symptoms. It follows a traumatic event where a person experiences a life threatening event to which they responded with intense fear, helplessness or horror, and has a higher prevalence rate in people exposed to a traumatic event than to those in the general population. A sexual assault is viewed as a traumatic event and it is assumed that following exposure to this trauma, an individual may exhibit symptoms of post-traumatic stress.

Spies (2006) described other effects of sexual assault, specifically in children, as low self-esteem, anger, hostility, regression, guilt and shame, avoiding intimacy, inappropriate sexualized behaviour, and self-injurious behaviour. He asserted that a number of factors, one of which was the stage of development a child is in when the abuse happens, influenced the effects of sexual assault. He used Erikson's development stages theory, and attributed trauma to not achieving a particular stage e.g. a loss of trust during the stage for trust and dependency on a caregiver. Lawrence and van Rensburg (2006) further elaborated on the complexity by adding individual, perpetrator, and environmental factors to the effect of sexual assault. Other authors such as Herman (1992) have also considered the impact of

prolonged assault versus a once-off incidence, and concluded that prolonged exposure may result in more severe, adverse effects.

Sexual assault in the intellectually disabled

As expected, there was previously little research exploring the effects of sexual assault on people with intellectual disability. This is in line with this topic being under-researched in the general population, as well as the lack of general research on people with intellectual disabilities, as discussed earlier. There are further reasons which may help understand why there is little research focusing specifically on sexual assault on this population. Firstly, there has been controversy and ambivalence toward the sexuality of intellectually disabled people (Cooke, 1997). This is because professionals find it difficult to 'think the unthinkable' and thus prefer to view this population as asexual (Allington-Smith et al., 2002). Secondly, it is difficult to determine the extent of sexual violence in this population due to factors such as underreporting. Although, this is a general difficulty in sexual crimes, it is particularly so in people with intellectual disability because of the impact of the difficulties associated with the disability. Thirdly, there is the previously held assumption that intellectually disabled people do not experience mental distress. It is also the fact that they may express distress differently from the general population, and thus cases of abuse may be missed (Cooke & Sinason, 1998).

Prevalence rates have shown that people living with intellectual disability have a higher occurrence of abuse than the general population (Reiter, Bryen & Shachar's, 2007; Sobsey & Mansell, 1994). The gender distribution is however similar to that of the general population with the majority of victims of sexual abuse were female, with the majority of offenders being male.

Authors have understood higher prevalence rates as a function of the vulnerability of people with intellectual disabilities. This is because perpetrators of sexual violence are usually known to the victim (Balogh et al., 2001; Hamber & Lewis, 1997). Also, people with

intellectual disabilities are reliant on others for their intimate care due to deficits in their adaptive skill (Allington-Smith et al., 2002). This presents as a complicating factor in them reporting someone they are reliant on as there would be concerns about who would care for them if the perpetrator is taken way. Additionally, there is a manipulation and grooming that occurs between the perpetrator and victim (Peckham, 2007). This combined with their communication difficulties makes them less likely to report incidences of assault. When they do report there is the added complication of their ability and capacity to be reliable witnesses (Sadan, Dikweni & Cassiem, 2001).

Of the sexual violent crimes reported in South Africa in 1997, only a fifth of them resulted in conviction (Statistics South Africa, 2000). The low reporting rates and even lower conviction rates mean that what would have been a deterrence to would-be abusers is not present, leaving the intellectually disabled population more vulnerable. Furthermore, people with intellectual disabilities lack sexual knowledge (Allington-Smith et al., 2002). This compounds difficulties with their ability to consent to sexual relations.

Sequelae of sexual assault in intellectually disabled

Although case-controlled, quantitative studies involving large samples are lacking, there are documented consequences and manifestations of sexual assault in people with intellectual disabilities. Some of these are similar to those seen in the general population for example, PTSD, while others are unique or more prevalent in the intellectually disabled population such as behavioural problems.

Sequeira et al. (2003) suggest that the presence of a mental illness is related to sexual assault in people with intellectual disabilities. This is in terms of diagnosable mental disorders, as well as the presence of symptoms of certain disorders. Increased rates of depression have been found to be associated with sexual trauma (Peckham, 2007). Research has also found the presence of symptoms of depression, following a sexual assault, though not necessarily the full range necessary for a diagnosis of depression. Some symptoms that have been found

include reduced self-esteem, the presence of self-harming behaviours, guilt, self-blame, withdrawal, irritability and lethargy (Balogh et al., 2001; Mansell, Sobsey & Calder, 1992; Murphy, O'Callaghan & Clare, 2007; Peckham, 2007; Sequeira et al., 2003).

Anxiety has also been found as one of the manifestations of a sexual trauma (Balogh et al., 2001). More specifically, people with intellectual disability who have experienced a sexual assault have been found to fulfil the criteria for a diagnosis of the PTSD (Mitchell, Clegg & Fumiss, 2006). There has however been some debate as to whether PTSD manifests itself in similar ways in people with intellectual disabilities and those without an intellectual disability (Firth et al, 2001; Mitchell & Clegg, 2005; Turk, Robbins & Woodhead, 2005). Some findings suggest that the pattern of response to trauma is similar to that of non-disabled people, except that intellectually disabled people experienced changes in their physical health too (Mitchell, Clegg & Fumiss, 2006). Other findings, for example Firth et al. (2001) indicate that there is a limited relationship between PTSD and sexual assault in people with intellectual disabilities, which is unlike what is found in the general population. One way of understanding the disparity in these findings is that a diagnosis of PTSD relies on verbal descriptions of thoughts and feelings, which are difficult for people with intellectual disability. This may result in the misdiagnosis or under-diagnosis of PTSD in this group (Turk et al., 2005).

As discussed earlier, challenging behaviours are one of the associated features of intellectual disability. There is also an association of challenging behaviour with sexual trauma (Mansell et al., 1992). Some of the associated challenging behaviours have already been mentioned when discussing symptoms of depression, for example, self-harming behaviours, withdrawal and lethargy. Other challenging behaviours that have been found to be associated with sexual assault are tantrums, non-compliance, and aggression (Balogh et al., 2001; Mansell et al., 1992; Murphy et al., 2007; Sobsey & Mansell, 1994). Other challenging behaviours reported include inappropriate sexualised behaviour, hyperactivity and increases in stereotypical behaviour (Mansell et al., 1992; Murphy et al., 2007; Sequeira et al., 2003; Sobsey & Mansell, 1994). It has also been found that there is a resultant difficulty in interpersonal

relationships, which plays a role in the vicious cycle of abuse, with victims of sexual assault later becoming perpetrators of sexual assault (Balogh et al., 2001; Peckham, 2007).

In summary, a review of the literature suggests that sexual assault in people with intellectual disabilities is associated with adverse effects. These include higher numbers of mental illness, behavioural difficulties and symptoms that have been identified as being a reaction to trauma. These are similar to the general population, although there are some differences. Differences such as the rate of PTSD and challenging behaviours give rise to the question of some of these differences, although there are some explanations such as misdiagnosis or under-diagnosis that may help in understanding these variations.

Aim of this research

This research aimed to explore the possibilities of identifying distress resulting from a sexual assault trauma in people with intellectual disabilities. As Cooke (1997) asserts, there is a need for detailed and accurate evaluation of psychopathology in people with intellectual disabilities in order to generate appropriate interventions (Cooke, 1997), and Allington-Smith et al. (2002) argue that without the ability to disclose sexual assault, as in the case of people with intellectual disabilities, there is a need to attend to symptom manifestation. This study aims to contribute to a fuller understanding of the behavioural manifestations of trauma from sexual assault in people with intellectual disability. This is pertinent given the scarcity of literature on this topic, particularly in the South African context with its high crime statistics.

Chapter 3 - Methodology

This study was part of a larger three part project investigating the effects of sexual assault in people with intellectual disabilities. The focus of this particular study was to investigate whether there were significant behavioural differences between intellectually disabled people who had been sexually assaulted versus those who had not been.

Design

This was an empirical study investigating whether there is a difference in the presentation of challenging behaviours in intellectually disabled people who have experienced a sexual assault, and those with no known history of such an assault. The study had a one-directional hypothesis. The hypothesis was that people with intellectual disability who have experienced a sexual assault will present with more aberrant behaviour than those from the same population who have not experienced a sexual assault. This follows from a review of the literature which suggests that sexual trauma in people with intellectual disability may have adverse effects on their behaviour.

The hypothesis was tested by selecting intellectually disabled people and placing them into two groups. The placement into either of the two groups was determined by whether a participant had experienced a sexual assault or not. Thus, the two groups were: intellectually disabled people with a history of a sexual assault and intellectually disabled people with no reported history of a sexual assault. Information about the behaviour of the participants was collected from their caregivers, using a self-report type questionnaire, which has been used in previous studies. It has a Likert scale for each item, which caregivers used to select the point which best described the person's behaviour in the past one month. Information from the questionnaire was then captured in numeric form on a computer and analysed using a statistical program.

This research used an empirical study design with new primary data because it is the first such study in South Africa investigating this particular question by using the Aberrant Behaviour Checklist-Community (ABC-C). The motive behind administering the questionnaire to two separate groups was to compare their behaviour. A questionnaire was used as it is a standardized measure, with standardized responses, which makes it easier to compare responses from the two groups. A questionnaire also facilitates administration to a larger number of people. The questionnaire was administered to caregivers and not the intellectually disabled people. This is because the study's focus was on observed behaviour, and not subjective experience. In addition to this, one of the associated features of intellectual disability is limited communication and understanding, which may have resulted in confounded responses as the intellectually disabled people may have had difficulties understanding the questionnaire requirements, and difficulties communicating their responses.

Study site

The site of the study was the Cape Mental Health Society (CMHS), a non-governmental organization that offers comprehensive mental health services to people with intellectual disabilities in the Western Cape of South Africa. The organization has a psycho-legal programme, Sexual Abuse Victim Empowerment (SAVE) in which psychologists assess complainants in sexual assault cases to evaluate their level of intellectual functioning, ability to consent to sexual acts and their competence to act as a witness in court. Following an assessment, a report is compiled that includes the following categories of information: background history, current functioning, behavior during assessment, tests administered and results, reactions to the incident, ability to consent to sex and competence as a witness.

Participants

A convenience sampling method was used to recruit participants, all of whom were accessed through CMHS. The participants were placed into two different groups. The first group consisted of SAVE clients who had reported a case of sexual assault to a local police station

and had or were waiting to undergo a psycho-legal assessment at the CMHS. This group met the requirements for the Sexual Offenses Amendment Act, 32 of 2007 for the charge to be investigated by a prosecutor, and taken to court if there was sufficient evidence for a case. Contact details for this group were taken from the psycho-legal assessment files of ongoing cases, and they were approached telephonically and invited to participate in the study. The total group consisted of 3 males and 24 females. Their average age was 18 years and 9 months (range: 10 years 2 months – 35 years 11 months).

The second group consisted of clients of CMHS with intellectual disability who lived in the community and were under the care of a social worker, but had no reported history of a sexual assault. They were contacted through their managing social workers, who invited them to participate in the study. An attempt was made to match the second group to the sexually assaulted group in as far as was possible. Thus a sample of individuals with intellectual disabilities were selected from those living in same or similar communities to the SAVE clients who constituted the first group. The total group consisted of 10 males and 17 females, with an average age of 29 years and 10 months (range: 14 years 0 months and 52 years and 10 months). Other demographic information of the participants is presented in Table 1. Exclusion criteria for both groups was if the participant had been actively psychotic during the month-long period that the behaviour was being assessed, and was severely or profoundly intellectually disabled.

Table 1. *Demographic information of the participants*

	Sexual Assault (n=27)	**No Sexual Assault (n=27)**
Race[1]		
African	7 (26%)	3 (11%)
Coloured	17 (63%)	21 (78%)
White	3 (11%)	2 (7%)
Indian	0 (0%)	1 (4%)
Gender		
Male	3 (11%)	10 (37%)
Female	24 (89%)	17 (63%)
Level of intellectual disability		
Mild	11 (41%)	15 (56%)
Moderate	10 (37%)	6 (22%)
Severe	0 (0%)	0 (0%)
Unspecified	6 (22%)	6 (22%)

[1] The writer is aware that the use of racial categories in South Africa is problematic as they stem from Apartheid era laws, which have since been repealed. Racial categories are however still used to identify different groups of people to help redress some of the injustices resulting from that period (for example service provision). In this study, racial categories are used to account for the inclusion of different groups from the population.

Instruments

Data was collected using the Abberrant Behaviour Checklist-Community (ABC-C). It is a standardized, self-report style, questionnaire whose reliability and validity is well established (Sequeira et al., 2003). It has 58 items to which the informant rates the presence of certain behaviours in the past month, on a 4-point-Likert-type scale: 0 - not a problem, 1 - a slight problem, 2 - a moderately serious problem, and 3 - a severe problem. The ABC-C consists of five subscales: Subscale I is Irritability, Subscale II is Lethargy, Subscale III is Stereotypy, Subscale IV is Hyperactivity and. Subscale V is Inappropriate speech (see Appendix A for the questionnaire and the scoring sheet). Examples of items from the various subscales are:

I. Irritability

-Cries over minor annoyances and hurts

-Temper tantrums/outbursts

II. Lethargy

-Fixed facial expression, lacks emotional responsivesness

-Does nothing but sit and watch others

III. Stereotypy

-Meaningless, recurring body movements

-Waves or shakes the extremities repeatedly

IV. Hyperactivity

-Restless, unable to sit still

-Constantly runs or jumps around the room

V. Inappropriate speech

-Talks to self loudly

-Repeats a word or phrase over and over

The rating scores for items from each subscale are added up to give a total score for the particular subscale. The higher the total score on a subscale, the higher the presences of problematic/aberrant behaviours falling under that domain. The same principle applies to the total score of the ABC-C questionnaire, which is the total rating score for all items on the scale.

Demographic information, including the intellectually disabled person's gender, date of birth, ethnic group, and level of disability is also recorded on the scale. There is also provision to detail the client's medical status, as well as the dosage and other specifications of any medications.

The ABC-C was translated into Afrikaans and isi-Xhosa to facilitate easier administration with individuals who were not English speakers. Although official translation services from University of the Western Cape were used it is important to note that some of the words on items of the questionnaire may not have a direct translation into Afrikaans or isi-Xhosa, so other phrasing may have been used to express the idea. In addition to this, even with English speaking caregivers, some of the items had to be explained to them for better understanding during administration.

Procedure

Permission for the project was sought from the Cape Mental Health Society, as well as ethical clearance from the ethics committee of the Humanities Faculty at the University of Cape Town. An hour long training was then held for the CMHS social workers who would be helping with data collection in the group with no reported history of sexual assault (control) group. The training included explaining the rationale for the study, going through the questionnaire, emphasizing what information would be required from the participants, as well as allowing for any questions that arose. The social workers were also given contact details in case there were any further questions. Sessions were then arranged with each social worker, where one of the main researchers would interview the same participant and compare scores

to determine inter-rater reliability, which was found to range from 75% to 95%. Two of the data collectors did not have an inter-rater assessment.

Participants were approached in person or telephonically and invited to participate. If they consented an appointment was made for the interview. The interview lasted between one and a half to two hours, with short breaks in-between. Questionnaires for all three parts of the larger project were administered by the same researcher during the interview session, which were conducted at pre-arranged times at the CMHS, CMHS workshop sites, the University of Cape Town Child Guidance Clinic, and participants' homes. Participants who had to travel to the CMHS and Child Guidance Clinic were reimbursed for their transport costs.

Data analysis

Data collected on the questionnaires was then captured on the statistical program Statistica Version 9, in preparation for analysis. In order to determine which statistical analyses would be most appropriate to perform, the data distributions for the scores on the total ABC-C checklist, and the subscales were examined.

There were a few high values from certain participants which skewed the distribution. (Refer to Figure A, in Appendix B for a graphical representation of the distribution of the total scores on the ABC-C). The Kolmogorov-Smirnov test, which was used to assess the normality of distribution yielded significant results on all the subscales, indicating that the data were not normally distributed. The Total ABC-C was the only one that was not significant. (Refer to Table A in Appendix B for the results). Levene's test for homogeneity was used to assess the significance of the variance in the distribution. The Irritability, Lethargy, Hyperactivity, and Inappropriate speech subscales, as well as the Total ABC-C scores were significant, indicating that they had heterogeneous variance. (Results are presented in Table B, in Appendix B).

As the data was not normally distributed, had heterogeneous variance, and came from a small sample size, the Mann-Whitney *U* test was used to analyse the differences between the groups. The Mann-Whitney *U* test is a non-parametric test, which uses the median rather than means and standard deviations in its analysis. This makes it more reliable and robust, and thus not easily influenced by some of the high values in the data set. Effect sizes were calculated using Vargha and Delaney's A (Vargha & Delaney, 2000). Vargha and Delaney's A was developed from the McGraw and Wong's Common Language Statistic and attempts to make it easier to communicate and understand effect size, in other words whether the probability that a score sampled at random from one distribution would be greater than or equal to a score sampled at random from another distribution (Vargha & Delaney, 2000). Results from the Mann-Whitney *U* test and Vargha & Delaney's A are presented in the next chapter.

Ethical considerations

People with intellectual disability are viewed as a vulnerable research population because their cognitive abilities limit their ability to fully comprehend the research process, and hence give informed consent. In this study the respondents were caregivers of people with intellectual disability, however the focus of the research was the individuals with intellectual disability. It thus meant that both caregivers and the intellectually disabled had to be taken into consideration throughout the study. The rationale of the study and its purpose was explained to both caregivers and the individuals with intellectual disability. Simple language was used when explaining to the individuals with intellectual disability, and both the caregiver and data collector explained the research. It was explained that confidentiality of information given by the participants would be maintained throughout all phases of the research process, with no identifying data being included in the reports on the research. Participants were notified of their right to withdraw consent at any point during data collection and this was raised at various points during the interview when checking that both the caregiver and person with intellectual disability were still willing to continue to the next section.

There was a concern that some questions posed to the participants with a history of a sexual assault may cause distress due to their previous trauma. This was addressed and all participants were assured of access to counselling services if deemed necessary or requested following the interviews. The study obtained ethical clearance from the ethics committee of the Humanities Faculty at the University of Cape Town, as well as the management of CMHS. In addition, a copy of the thesis will be given to CMHS on completion.

Chapter 4 - Results

This chapter presents results of the performance of the sexual assault and no sexual assault groups on the ABC-C checklist. The aim of the study was to determine whether there was a difference in the pattern of behavioural challenges observed in people with intellectual disabilities who had experienced a sexual assault versus those that had not. The Mann-Whitney *U* test was used to analyze differences between the two groups, and Vargha and Delaney's A used to calculate effect sizes. These tests are most suitable to assess whether there is a difference in the presence and severity of challenging behaviours between the two groups.

Firstly, results of the two groups' total scores on the ABC-C will be presented. This will be followed by results for each of the subscales in the following order: Irritability, Lethargy, Hyperactivity, Stereotypy, Inappropriate speech. The format that will be used to present each of these domains' analyses will be as follows:

- presentation of means, medians, and standard deviations to show whether there are differences in the two groups' performance.
- a graphic presentation of the distribution of scores using Box and Whisker plots.
- results from the Mann-Whitney *U* and Vargha and Delaney's A tests analyzing the significance of differences found and the effect sizes.

The significance p-level value that will be used for all results is $p < 0.05$.

Total ABC-C

Participants who had a history of a sexual assault had higher scores on the ABC-C as a whole, which means that they had more challenging behaviours than the group that had no reported history of a sexual assault. Table 2 presents the mean, median and standard deviation results, and Figure i a graphic presentation of the distribution of these scores.

Table 2. *Mean, Median and Standard deviation scores on the total ABC-C*

	Sexual Assault	No Sexual Assault
Mean	35.15	14.85
Median	35.00	10.00
Standard deviation	25.85	15.23

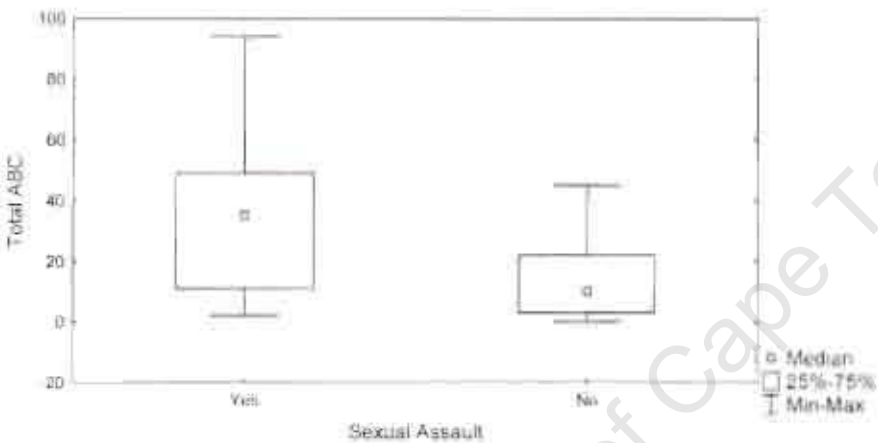

Figure 1. *Distribution of the Total ABC-C scores.*

Results from the Mann-Whitney *U* test show that participants who had experienced a sexual assault had a significantly higher median score on the total ABC-C checklist, than those who had not (35.00: 10.00, $p = 0.001$). This means that the Sexual Assault group had more challenging behaviours overall and that these behaviours were more severe than those reported for the No Sexual Assault group. There is a 74.90% chance that a score sampled at random from the Sexual Assault group will be equal to or higher than a score sampled from the No Sexual Assault group. Refer to Table 3 for these results.

Table 3. *Results showing the significance of differences on the total ABC-C*

Rank Sum Sexual Assault	Rank Sum No Sexual Assault	*U*	Median Sexual Assault	Median No Sexual Assault	1-sided p-value	Effect Size A
924.00	561.00	183.00	35.00	10.00	0.001	74.9%

Irritability

The sexual assault group had higher scores on the Irritability subscale, than those in the No Sexual Assault group. This means that participants with a history of a sexual assault had more irritable behaviours than those without. See Table 4 for the mean, median, and standard deviation results, and Figure ii for a graphic presentation of the distribution of these scores.

Table 4. *Mean, Median and Standard deviation scores on the Irritability subscale.*

	Sexual Assault	No Sexual Assault
Mean	10.15	4.89
Median	8.00	3.00
Standard deviation	9.45	5.79

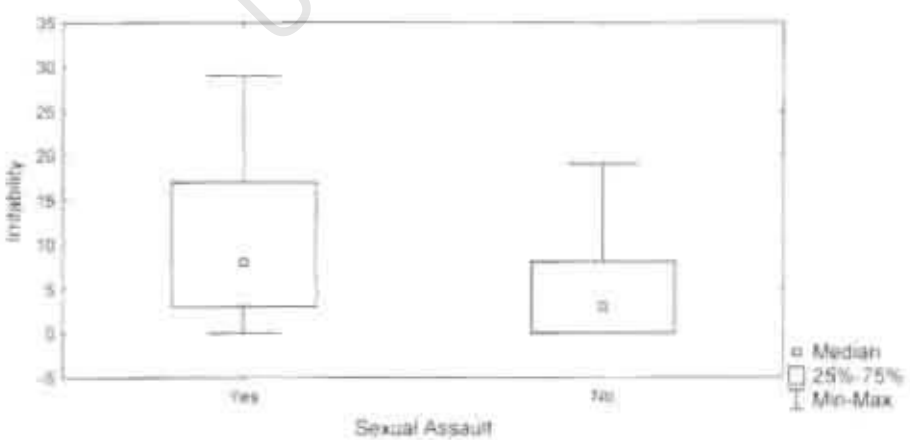

Figure ii. *Distribution of scores on the Irritability subscale*

Results from the Mann-Whitney *U* test show that differences seen between the two groups were significant (p = 0.02), with the Sexual Assault group being more irritable than the No Sexual Assault group (8.00: 3.00). The probability that a score sampled at random from the Sexual Assault group would be equal to or higher than a score sampled from the other group is 68.3%. See Table 5 for these results.

Table 5. *Results showing the significance of differences on the Irritability subscale.*

Rank Sum Sexual Assault	**Rank Sum No Sexual Assault**	***U***	**Median Sexual Assault**	**Median No Sexual Assault**	**1-sided p-value**	**Effect Size A**
874.00	611.00	233.00	8.00	3.00	0.02	68.3%

Lethargy

The Sexual Assault group had higher scores on this subscale i.e. more lethargy behaviours than the No Sexual Assault group. See Table 6 for the mean, median, and standard deviation results, and Figure iii for a graphic presentation of the distribution of these scores.

Table 6. *Mean, Median and Standard deviation scores on the Lethargy subscale.*

	Sexual Assault	**No Sexual Assault**
Mean	9.15	2.89
Median	6.00	1.00
Standard deviation	9.38	4.04

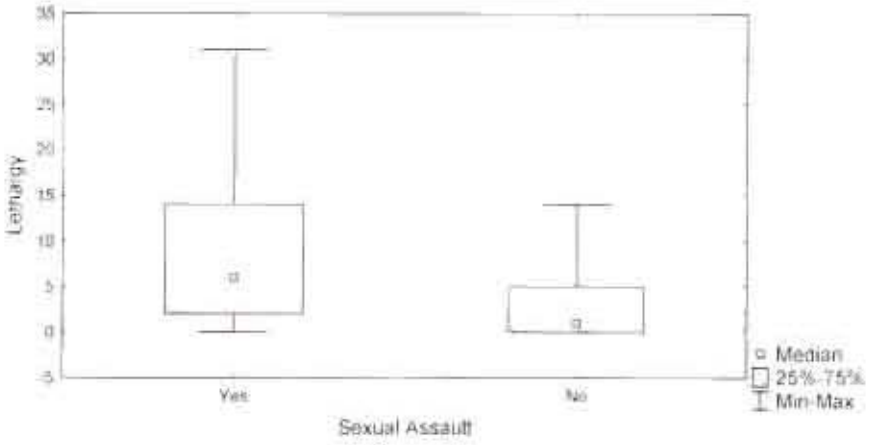

Figure iii. *Distribution of scores on the Lethargy subscale.*

When tested with the Mann-Whitney *U* test, the Sexual Assault group had a significantly higher median Lethargy subscale score than the No Sexual Assault group (6.00: 1.00, $p < 0.001$). This means that they had significantly more lethargy behaviours than participants without a history of a sexual assault. There was a 77.0% chance that a randomly sampled score from this group would be higher than one sampled from those without a history of a sexual assault, as shown in Table 7 below.

Table 7. *Results showing the significance of differences on the Lethargy subscale.*

Rank Sum Sexual Assault	Rank Sum No Sexual Assault	*U*	Median Sexual Assault	Median No Sexual Assault	1-sided p-value	Effect Size A
939.50	545.50	167.50	6.00	1.00	<0.001	77.0%

Hyperactivity

There were more hyperactive behaviours in participants with a history of a sexual assault than those without, and this is evident through the former's higher scores on the Hyperactivity subscale. Table 8 presents the mean, median, and standard deviation for the two groups and Figure iv a graphic presentation of the distribution of the subscale scores.

Table 8. *Mean, Median and Standard deviation scores on the Hyperactivity subscale*

	Sexual Assault	No Sexual Assault
Mean	12.74	5.93
Median	7.00	4.00
Standard deviation	13.10	6.29

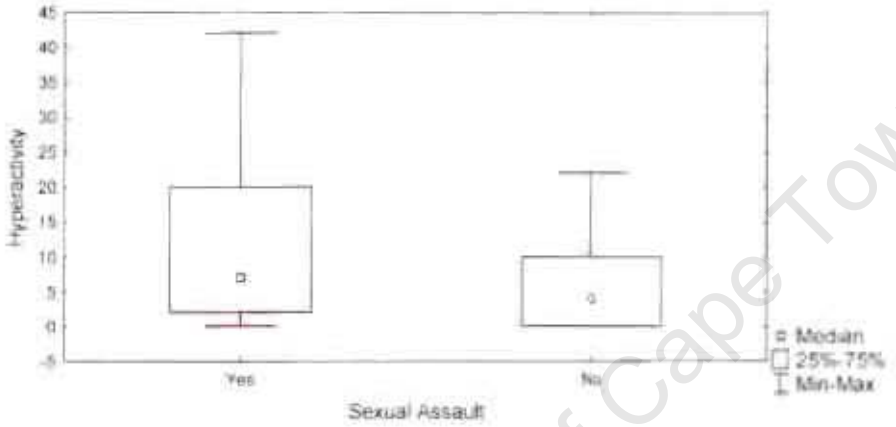

Figure iv. *Distribution of scores on the Hyperactivity subscale.*

The group which had experienced a sexual assault had a significantly higher median score. than those who had not (7.00; 4.00, $p = 0.04$), which indicates that they had significantly more hyperactive behaviours than the group without a history of a sexual assault. The probability that a score sampled at random from the sexually assaulted group would be higher than that sampled from the group without a history of sexual assault is 66.12%. Table 9 presents these results.

Table 9. *Results showing the significance of differences on the Hyperactivity subscale.*

Rank Sum Sexual Assault	Rank Sum No Sexual Assault	*U*	Median Sexual Assault	Median No Sexual Assault	1-sided p-value	Effect Size A
860.00	625.00	247.00	7.00	4.00	0.04	66.12%

Stereotypy

There was a slight difference in the presence of stereotypical behaviours between the two groups. The sexual assault group had a slightly higher mean score than the no sexual assault group, but both groups had the same median scores on this subscale. See Table 10 for the mean, median, and standard deviation results, and Figure v for a graphic presentation of the distribution of these scores.

Table 10. *Mean, Median and Standard deviation scores on the Stereotypy subscale.*

	Sexual Assault	No Sexual Assault
Mean	0.93	0.37
Median	0.00	0.00
Standard deviation	1.44	1.08

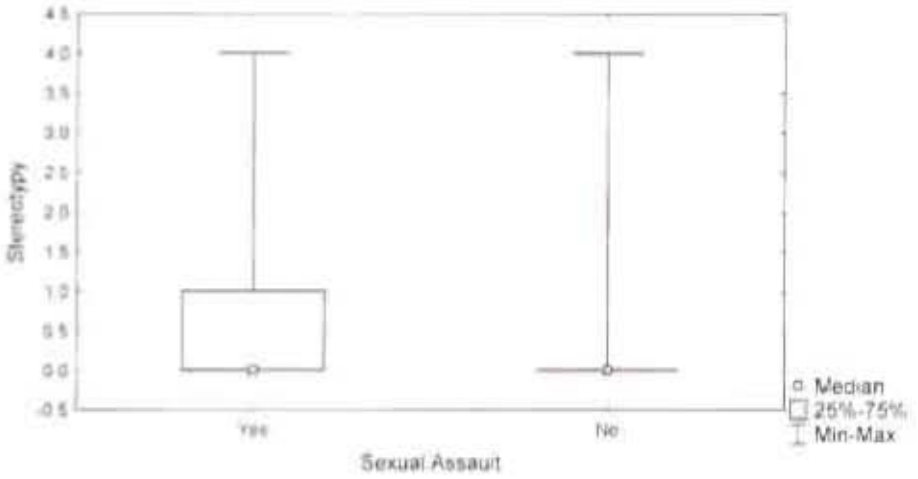

Figure v. *Distribution of scores on the Stereotypy subscale.*

Mann-Whitney *U* results on this subscale were not significant ($p = 0.11$), demonstrating that there was no significant difference in the presence of stereotypical behaviours between the two groups. Table 11 presents these results.

Table 11. *Results showing the significance of differences on the Stereotypy subscale.*

Rank Sum Sexual Assault	Rank Sum No Sexual Assault	*U*	Median Sexual Assault	Median No Sexual Assault	1-sided p-value	Effect Size A
836.00	649.00	271.00	0.00	0.00	0.11	62.82%

Inappropriate speech

There was a small difference on the Inappropriate speech subscale scores between the two groups, with the Sexual Assault group's mean slightly higher than the No Sexual Assault group. Both groups had the same median scores on this subscale. See Table 12 for the mean, median, and standard deviation results, and Figure vi for a graphic presentation of the distribution of these scores.

Table 12. *Mean, Median and Standard deviation scores on the Inappropriate speech subscale.*

	Sexual Assault	No Sexual Assault
Mean	2.19	0.78
Median	1.00	1.00
Standard deviation	3.65	0.89

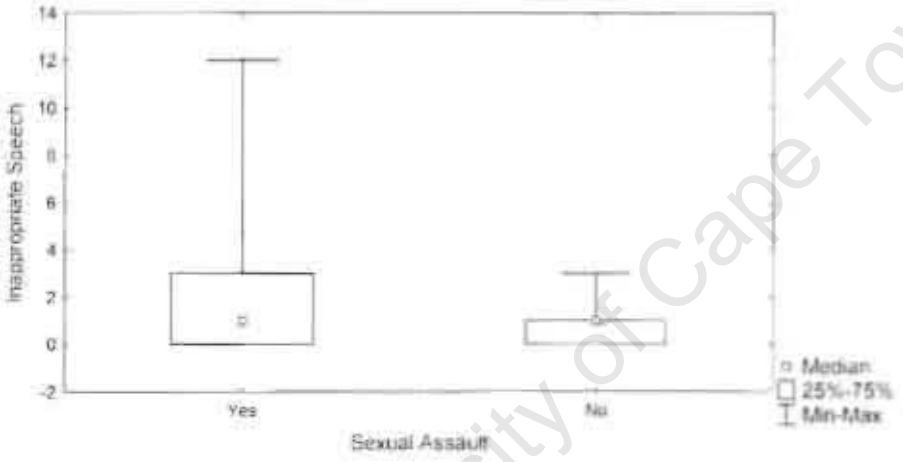

Figure vi. *Distribution of scores on the Inappropriate speech subscale.*

The results of the Mann-Whitney *U* were not significant for this subscale ($p = 0.15$), demonstrating that there was no significant difference in the amount of inappropriate speech between the two groups Table 13 presents these results.

Table 13. *Results showing the significance of differences on the Inappropriate speech subscale*

Rank Sum Sexual Assault	Rank Sum No Sexual Assault	*U*	Median Sexual Assault	Median No Sexual Assault	1-sided p-value	Effect Size A
825.50	659.50	281.50	1.00	1.00	0.15	61.39%

Summary of results

In summary, participants with intellectual disabilities who had experienced a sexual assault displayed significantly more frequent and severe challenging behaviours than participants with intellectual disabilities who had not experienced a sexual assault. Specifically, participants with a history of sexual assault were reported to display more irritability, lethargy and hyperactivity than the participants with no history of sexual assault. These results support this study's one-directional hypothesis. There were however, no significant differences between the two groups in their presentation of stereotypical behaviours and amount of inappropriate speech, and the hypothesis was nullified on these subscales.

Chapter 5 – Discussion and conclusion

This chapter will be interpreting and understanding results presented in the previous section. The first part will present a discussion of the results, comparing them to what has been reported in other studies and the literature reviewed. A brief summary of the findings from the overall scale and each subscale will be given first and then discussed. The second part of the chapter will be the conclusion, and this will begin with a brief overview of the whole study and then the implications of the study findings will be presented. The last part of this section will provide reflections on the whole process, the limitations of this study and recommendations for future research.

Discussion

Total ABC-C

The overall results show that there was a difference in the presentation of challenging behaviours between the two groups. Participants who had experienced a sexual assault had a significantly higher score on the ABC-C checklist, suggesting that they had more aberrant behaviours present, and these behaviours were also more severe, when compared to other intellectually disabled who did not have a history of a sexual assault.

Previous research has found similar results to this study's findings that trauma in intellectually disabled people has adverse effects. Studies have found that a traumatic experience, in particular a sexual assault, is associated with the presence of more challenging behaviours, as well as an accentuation of some of the associated features of intellectual disability (Emerson et al, 2001; Matson et al., 2008; Moss et al., 2000; Peckham, 2007). These finding are also consistent with those of Sequeira et al. (2003) who utilized the ABC-C checklist in a similar comparative study and found that those who had experienced a sexual assault had more challenging behaviours.

One possible explanation for the presence of more challenging behaviours following a sexual assault is that people with intellectual disabilities lack sexual knowledge and their limited understanding exacerbates the effect of a traumatic experience (Allington-Smith & Haytor, 2002; Harper & Wadsworth, 1993). This means that the impact of the sexual assault and limited understanding may have manifested itself through the increase in, and severe challenging behaviours observed by the caregivers. Additionally, another feature of intellectual disability is limited communication skills, and it may be that the participants with intellectual disability were expressing their distress from the trauma through their behaviour.

More specifically, there were certain behavioural domains, captured by specific subscales, where differences were found between the two groups.

Irritability

Participants with a history of a sexual assault had significantly higher scores on the Irritability Subscale, when compared to those without a history of a sexual assault. This suggests that they had more irritability, crying, and agitation. This finding is similar to previous research using the ABC-C, which found that intellectually disabled people who had experienced a sexual assault had significantly more challenging behaviour in this subscale (Sequeira et al., 2003). It is also similar to a study on people with intellectual disabilities who had experienced bereavement, and their loss was associated with increased challenging behaviours on the Irritability subscale, when compared to those who had not had bereavement (Hollins & Esterhuyzen, 1997).

It is possible that the irritable behaviours observed in the participants with a history of a sexual assault was expression of an underlying depression following the trauma. This is because irritability and crying are some symptoms of depression in the DSM-IV TR (APA, 2000). Also, irritable behaviours are mainly seen as a symptom of depression in children (APA, 2000), and this may include people with intellectual disabilities if one considers their mental age and not chronological age.

Lethargy

The participants who had been sexually assaulted also had significantly higher scores on the Lethargy subscale, suggesting that they had more lethargy and social withdrawn behaviours than those who had not experienced a sexual assault. Hollins and Esterhuyzen (1997) and Sequeira et al. (2003) also found similar results in their studies. Lethargy may be a symptom of depression (i.e. psychomotor retardation) as seen in the DSM-IV TR (APA, 2000). Their social withdrawal may be a way to protect themselves as they may now feel unsafe in the world following their traumatic event.

Hyperactivity

On the Hyperactivity subscale, significantly higher scores were found in the group that had experienced a sexual assault. This suggests that the sexually assaulted group had more hyperactive and non-compliant behaviours than those who had not been sexually assaulted. Previous studies using the ABC-C have found similar results when used in people with intellectual disabilities who had experienced a trauma (Hollins & Esterhuyzen, 1997; Sequeira et al., 2003).

Anxiety has been found to be one of the main reactions to a sexual assault (Balogh et al., 2001; Petrak, 2002b). It is possible that the participants with a history of a sexual assault were hyperactive in an attempt to manage their anxiety following their sexual assault experience. They would therefore be understood as trying to keep busy to stop themselves from thinking about their past trauma. It may also have been that they had developed PTSD (an anxiety disorder), following the assault, which has also been detailed as one of the effects of trauma (Mitchell et al., 2006).

Stereotypy

There were no significant differences between the two groups' performance on the Stereotypy subscale. This suggests that participants who had a history of a sexual assault had

a similar pattern of stereotypical behaviours as those without a history of a sexual assault. This result is consistent with Hollins and Esterhuyzen's (1997) findings, although it differs with Sequeira et al. (2003) who found significantly higher stereotypical behaviours in their participants with intellectual disabilities and a history of a sexual assault.

It is possible that participants in this study also had an increase in stereotypical behaviours, but these were overlooked by their caregivers. They may have been overlooked because stereotypy is one of the associated features of intellectual disability and caregivers may have been mistakenly attributing their behaviour to this and not recognising it as a reaction to trauma as has been argued in previous literature. In addition to this, there is a possibility that some participants in the No Sexual Assault group had actually experienced a sexual assault, but due to the nature of sexual crimes, low reporting rate and limited cognitive abilities may not have reported it to their caregivers, and hence this confounded these results.

Inappropriate speech

There was also no significant difference between the two groups' performance on the Inappropriate speech subscale. This suggests that participants with a history of a sexual assault had a similar amount of inappropriate speech as those with no sexual assault history. Previous studies investigating trauma manifestation in the intellectually disabled, have also not found differences on this subscale (Hollins & Esterhuyzen, 1997; Sequeira et al., 2003). It is possible that speech is not affected by trauma in people with intellectual disabilities. It is also possible that once again inappropriate speech is being overlooked as it is an associated feature of intellectual disability and caregivers are seeing it as merely limited vocabulary and speech capabilities. The possibility of some participants in the No Sexual Assault group having actually experienced a sexual assault and this confounding the results may also be pertinent here.

Within group variation

In addition to differences found between the two groups, there was also some variation within the groups as seen in the significant results from the Levene's test, suggesting that the data had heterogeneous variance. The group with a history of a sexual assault had some participants who presented with more severe challenging behaviours than others. There are several reasons why this was the case.

Lawrence and van Rensburg (2006) suggest that individual, perpetrator and environmental factors have an influence and need to be taken into consideration when understanding the sequelae of sexual trauma. Also, the stage of development an individual is in when sexual assault occurs may influence the impact the sexual assault has (Spies, 2006). Participants in this study had varying levels of intellectual disabilities, caregivers, perpetrator characteristics, the amount of support available to them following the assault, and other environmental factors. It is probable that these had an effect on their reaction to the sexual assaults they experienced, and subsequently the amount of manifested distress, in this case challenging behaviours. It may explain why some of the participants had a more severe presentation of challenging behaviours, even within the same group of those who had a history of a sexual assault. Those with less challenging behaviours may have had buffers within the above factors that affected their response to the sexual assault. They may have had a particular temperament, attachment, and attribution of negative effects, which some authors think have an influence (e.g. Firth et al., 2001).

Conclusion

This study sought to investigate whether there was a difference in the presence of the challenging behaviours found between people with intellectual disabilities who had a history of a sexual assault, and those with no such history. The ABC-C, a scale that has been used in previous studies and has valid and reliable properties was administered to caregivers of both group to rate the presence and severity of challenging behaviours in the individuals with

intellectual disability. The results showed significant differences on the overall scale, and three of the subscales: Irritability, Lethargy and Hyperactivity. There was no significant difference on two of the subscales: Stereotypy and Inappropriate speech. There was also some variation within groups with some participants in the group with a history of a sexual assault presenting with higher and more severe behaviours than others in the same group.

This is the first study specifically exploring behavioural manifestations of sexual assault in this population in South Africa, and these results are in line with previous international research. The results suggest that the presence or increase in challenging behaviours in people with intellectual behaviours may be linked to sexual trauma, and needs to be investigated further. Caregivers and other members of the community need to recognize that people with intellectual disability may not always disclose an incidence of sexual assault, and hence need to identify challenging behaviours as not merely a feature of intellectual disability because there are individuals with intellectual disability only, who do not present with such frequent/severe aberrant behaviours.

It would be valuable for caregivers to receive psycho-education about the possible link between trauma and challenging behaviour, to help them manage the individual's behaviour and improve levels of functioning. An example of this is how a person with intellectual disabilities may present with hyperactive behaviour, such as that found significant in participants of this study, and this behaviour is an attempt for them to manage anxiety resulting from a trauma. In this case, it would be helpful for the caregiver to have a compassionate response to the hyperactive behaviour, rather than a punitive one, which may only increase their anxiety and exacerbate the problem behaviour. The caregivers of such individuals may benefit from some training in behaviour management.

Some of the significant differences found between the groups were in subscales that include behaviours that are also symptoms of diagnosable mental disorders such as depression and PTSD. It is therefore important for caregivers and caseworkers to not only see the

challenging behaviour as a possible expression of trauma, but also a mental illness resulting from the trauma. Hence individuals presenting in this way should have a thorough clinical evaluation. A proper assessment using instruments appropriate for this population, and taking caregiver accounts of an individual's functioning will be useful. This would be the first step in them receiving appropriate intervention and treatment.

The study's findings also suggest that there is need for further research to establish relationships between specific factors that may be important and influence or mediate the amount of challenging behaviours manifested. This would also help in people with intellectual disabilities who have experienced a sexual assault receiving effective interventions, and may help in establishing policies that have the right mediating factors in place.

Limitations of the study

One of the limitations of this study is that it investigates whether there are any behavioural differences between the two groups of intellectually disabled people, but does not explore all the factors which might mitigate or exacerbate challenging behaviours. Some examples of possible factors are perpetrator characteristics, and specifics of the sexual assault (time since assault, prolonged versus once off).

Another limitation is that data was derived from a relatively small, and a select sample i.e. people with intellectually disabilities who had undergone the CMHS psycho-legal assessment. This means that there may have been a characteristic exclusive to these participants which may have affected their response to the sexual assault. An example of this is how the court process or process of investigating the case may have added to that group of participants' experience of trauma and therefore the amount of challenging behaviours they presented with. This may affect the generalizability of the findings of this study.

Also, the respondents of the questionnaire were caregivers of people with intellectual disabilities. The caregivers were aware of the researchers affiliation with the CMHS, which may have affected their motivation. An example of this is the caregivers of the individuals who had been sexually assaulted and had their case investigated, and may hence have exaggerated the behaviours they were reporting assuming it would assist the investigation, even though it was clearly explained that this process was unrelated to the court one.

Despite some of the limitations of the study that have been presented, it has been useful to find that there is a difference in the presentation of challenging behaviours in intellectually disabled people who have experienced a sexual assault when compared to those that have not. This finding with this small and select sample group can be further investigated by future studies which may explore some of the questions raised by the findings as well as the limitations within which they were found. Some recommendations for the course future research can take are given in the next section.

Suggestions for future research

Future research may explore whether differences found in the presence and frequency of challenging behaviours between intellectually disabled people who have experienced a sexual assault and those that have not, vary depending on specific factors. These factors include, but are not limited to: gender, age, ethnicity, nature of sexual assault, perpetrator characteristics, time since sexual assault, caregiver characteristics, presence of stressors and other trauma. This could be done through tighter case-control, and use of a larger and randomized sample. It would also be interesting to explore long-term effects of sexual assault on behaviour through a longitudinal study.

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Appendix A

ABERRANT BEHAVIOR CHECKLIST— COMMUNITY

Client's Name: _____ Rater's Name: _____

Client's Gender (circle): Male/Female

Relationship to Client (check):
- ☐ Parent
- ☐ Teacher
- ☐ Trainer/Supervisor
- ☐ Other (please specify) _____

Date of Birth ____/____/____ (Month Day Year)

Today's Date ____/____/____ (Month Day Year)

Where Was the Client Observed?
- ☐ Home
- ☐ School
- ☐ Residential Unit
- ☐ Workshop
- ☐ Other (please specify) _____

If in School, Type of Class (check one):
- ☐ Developmentally Handicapped
- ☐ Multihandicapped
- ☐ Severe Behavior Handicap
- ☐ Other _____

Ethnic Group (check):
- ☐ Caucasian
- ☐ Hispanic
- ☐ African-American
- ☐ Other (please specify) _____

CLIENT'S MEDICAL STATUS (Please circle)

a. Deafness?	No	Yes	? (Don't Know)
b. Blindness?	No	Yes	?
c. Epilepsy?	No	Yes	?
d. Cerebral Palsy?	No	Yes	?

e. Other _____

CURRENT MEDICATIONS (Please list any medication and dosage schedule)

1. _____
2. _____
3. _____
4. _____
5. _____

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INSTRUCTIONS

The ABC–Community rating scale is designed to be used with clients living in the community. Please note that the term *client* is used throughout to refer to the person being rated. This may be a child of school age, an adolescent, or an adult.

Please rate this client's behavior for the last four weeks. For each item, decide whether the behavior is a problem and circle the appropriate number:

0 = not at all a problem
1 = the behavior is a problem but slight in degree
2 = the problem is moderately serious
3 = the problem is severe in degree

When judging this client's behavior, please keep the following points in mind:

(a) Take relative *frequency* into account for each behavior specified. For example if the client averages more temper outbursts than most other clients you know or most others in his/her class, it is probably moderately serious (2) or severe (3) even if these occur only once or twice a week. Other behaviors, such as noncompliance, would probably have to occur more frequently to merit an extreme rating.

(b) If you have access to this information, consider the experiences of other care providers with this client. If the client has problems with others but not with you, try to take the whole picture into account.

(c) Try to consider whether a given behavior interferes with his/her *development, functioning*, or *relationships*. For example, body rocking or social withdrawal may not disrupt other children or adults, but it almost certainly hinders individual development or functioning.

Do not spend too much time on each item — your first reaction is usually the right one.

1. Excessively active at home, school, work, or elsewhere	0	1	2	3
2. Injures self on purpose	0	1	2	3
3. Listless, sluggish, inactive	0	1	2	3
4. Aggressive to other children or adults (verbally or physically)	0	1	2	3
5. Seeks isolation from others	0	1	2	3
6. Meaningless, recurring body movements	0	1	2	3
7. Boisterous (inappropriately noisy and rough)	0	1	2	3
8. Screams inappropriately	0	1	2	3
9. Talks excessively	0	1	2	3
10. Temper tantrums/outbursts	0	1	2	3
11. Stereotyped behavior; abnormal, repetitive movements	0	1	2	3
12. Preoccupied; stares into space	0	1	2	3
13. Impulsive (acts without thinking)	0	1	2	3
14. Irritable and whiny	0	1	2	3
15. Restless, unable to sit still	0	1	2	3
16. Withdrawn; prefers solitary activities	0	1	2	3
17. Odd, bizarre in behavior	0	1	2	3
18. Disobedient; difficult to control	0	1	2	3
19. Yells at inappropriate times	0	1	2	3
20. Fixed facial expression; lacks emotional responsiveness	0	1	2	3

21. Disturbs others	0	1	2	3
22. Repetitive speech	0	1	2	3
23. Does nothing but sit and watch others	0	1	2	3
24. Uncooperative	0	1	2	3
25. Depressed mood	0	1	2	3
26. Resists any form of physical contact	0	1	2	3
27. Moves or rolls head back and forth repetitively	0	1	2	3
28. Does not pay attention to instructions	0	1	2	3
29. Demands must be met immediately	0	1	2	3
30. Isolates himself/herself from other children or adults	0	1	2	3
31. Disrupts group activities	0	1	2	3
32. Sits or stands in one position for a long time	0	1	2	3
33. Talks to self loudly	0	1	2	3
34. Cries over minor annoyances and hurts	0	1	2	3
35. Repetitive hand, body, or head movements	0	1	2	3
36. Mood changes quickly	0	1	2	3
37. Unresponsive to structured activities (does not react)	0	1	2	3
38. Does not stay in seat (e.g., during lessons or training periods, meals, etc.)	0	1	2	3
39. Will not sit still for any length of time	0	1	2	3
40. Is difficult to reach, contact, or get through to	0	1	2	3
41. Cries and screams inappropriately	0	1	2	3
42. Prefers to be alone	0	1	2	3
43. Does not try to communicate by words or gestures	0	1	2	3
44. Easily distractible	0	1	2	3
45. Waves or shakes the extremities repeatedly	0	1	2	3
46. Repeats a word or phrase over and over	0	1	2	3
47. Stamps feet or bangs objects or slams doors	0	1	2	3
48. Constantly runs or jumps around the room	0	1	2	3
49. Rocks body back and forth repeatedly	0	1	2	3
50. Deliberately hurts himself/herself	0	1	2	3
51. Pays no attention when spoken to	0	1	2	3
52. Does physical violence to self	0	1	2	3
53. Inactive, never moves spontaneously	0	1	2	3
54. Tends to be excessively active	0	1	2	3
55. Responds negatively to affection	0	1	2	3
56. Deliberately ignores directions	0	1	2	3
57. Has temper outbursts or tantrums when he/she does not get own way	0	1	2	3
58. Shows few social reactions to others	0	1	2	3

ABERRANT BEHAVIOR CHECKLIST

SCORE SHEET

Resident's Name: _____

Date: _____ **Study Phase:** _____

Rater: _____

Subscale I (Irritability)	Subscale II (Lethargy)	Subscale III (Stereotypy)	Subscale IV (Hyperactivity)	Subscale V (Inappropriate Speech)
2 _____	3 _____	6 _____	1 _____	9 _____
4 _____	5 _____	11 _____	7 _____	22 _____
8 _____	12 _____	17 _____	13 _____	33 _____
10 _____	16 _____	27 _____	15 _____	46 _____
14 _____	20 _____	35 _____	18 _____	
19 _____	23 _____	45 _____	21 _____	
25 _____	26 _____	49 _____	24 _____	
29 _____	30 _____		28 _____	
34 _____	32 _____		31 _____	
36 _____	37 _____		38 _____	
41 _____	40 _____		39 _____	
47 _____	42 _____		44 _____	
50 _____	43 _____		48 _____	
52 _____	53 _____		51 _____	
57 _____	55 _____		54 _____	
	58 _____		56 _____	
Total _____	Total _____	Total _____	Total _____	Total _____

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Appendix B

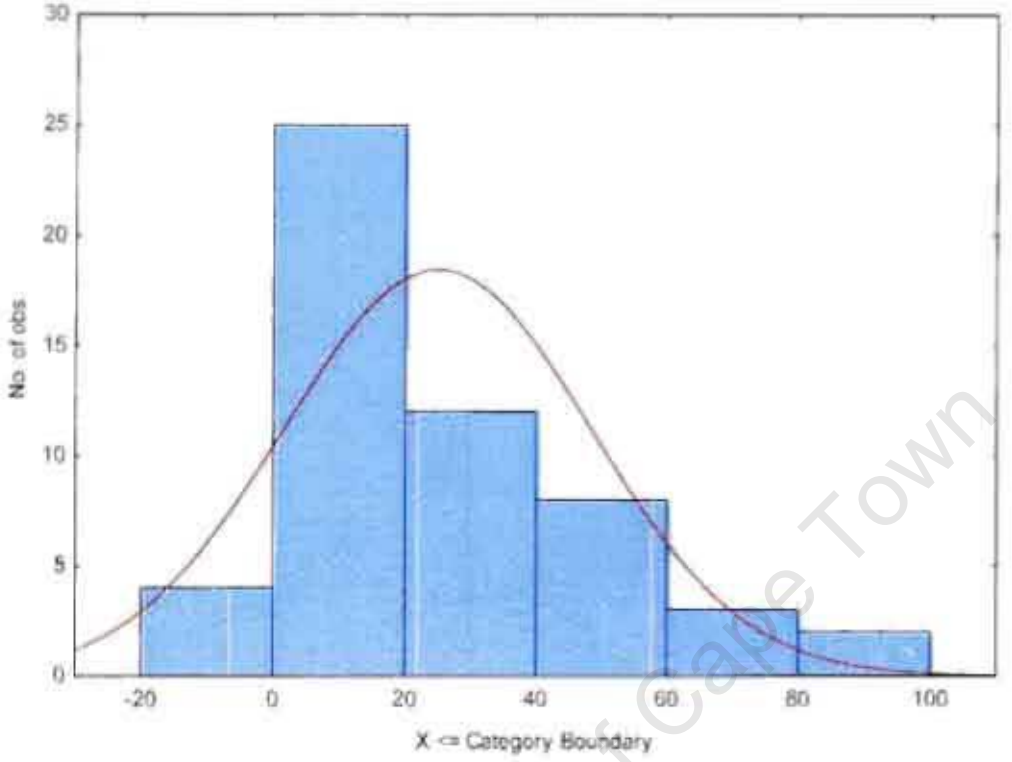

Figure A. *Histogram of the distribution of the participants' total score on the ABC-C checklist.*

Table A. *Results of the Kolmogorov-Smirnov tests for normality*

Subscale	K-S statistic	p-value
Irritability	0.19	< 0.05*
Lethargy	0.22	< 0.05*
Stereotypy	0.41	< 0.01*
Hyperactivity	0.19	< 0.05*
Inappropriate speech	0.26	< 0.01*
Total ABC-C	0.14	> 0.20

*p < 0.05

Table B. *Results of Levene's test for homogeneity*

	Levene F	p-value
Irritability	6.80	0.01*
Lethargy	12.02	< 0.001*
Stereotypy	3.74	0.06
Hyperactivity	11.38	< 0.001*
Inappropriate speech	11.85	< 0.001*
Total ABC-C	5.57	0.02*

NOTE: the degrees of freedom for each subscale and the Total ABC-C was 52

*p < 0.05