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Educational psychologists’ perspectives on the treatment of autism spectrum disorder (ASD) children in the South African context

by

Nazrana Ally

2580583

Supervisor: Dr Nicky Israel

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Plagiarism declaration

I, Nazrana Ally, declare that this research project (ethics clearance number: MEDPSYC/22/03) is my own, unaided work. It has not been submitted before for this or any other degree or for examination at this or any other university.

Signed: N.ally

Date: 25/ 03/2024

Abstract

This qualitative study aimed to explore a sample of South African registered educational psychologists' perspectives on and experiences with the treatment of autism spectrum disorder (ASD) children in the South African context, including their awareness of available treatments, evaluation of treatment effectiveness, decision-making processes, level of involvement in treatment stages, and their roles in relation to other professionals. Additionally, it examined the psychologists' perceptions of the challenges faced by ASD children and their parents in accessing treatment in South Africa, the common strategies they employed, and the difficulties they encountered when treating ASD children.

An interpretive approach was used, employing semi-structured interviews conducted in English with eight South African registered educational psychologists specializing in ASD. The interviews were audio-recorded, transcribed verbatim, and analyzed using reflexive thematic analysis, informed by a self-reflexive journal to maintain awareness of potential biases.

The findings highlighted the scarcity of educational psychologists in South Africa engaged in ASD cases, limited specialized ASD training, and a paucity of resources available in South Africa which encouraged participants to seek resources internationally. Participants emphasized the importance of evidence-based, individualized interventions tailored to each child's context. They also emphasized that diverse approaches were crucial for meeting the individual needs of both the child and the family. They raised concerns about applied behaviour analysis (ABA), citing its potential limitations in fostering flexibility and promoting rote learning. They recommended modifying cognitive-behavioural methods to suit specific contexts and moving away from clinical environments to foster creativity and resourcefulness.

Participants were actively involved in diagnosis and assessment, highlighting the importance of exposing educational psychology students to various ASD-specific assessments and emphasizing the need for addressing training gaps and cost barriers for accessing assessment tools. Educating stakeholders, including parents, teachers, and other professionals, was deemed essential for creating a supportive and informed environment for children with ASD. Significant challenges identified included limited ASD-specific training, a lack of support and awareness, long waiting periods for diagnosis, limited access to treatment, and stigmas associated with ASD. Addressing these challenges requires grassroots training initiatives and collaborative efforts among families, professionals, and policymakers to ensure quality care and support for individuals with ASD.

Keywords

Autism spectrum disorder (ASD), educational psychologists, treatment, South Africa, evidence-based intervention, support, training, resources

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Chapter 1: Introduction

This chapter will set the stage for an in-depth exploration of educational psychologists' perspectives on the treatment of autism spectrum disorder (ASD) in the unique context of South Africa. The chapter will explain the background and rationale for the study and provide an overview of its overall structure.

Background and rationale

This study explores educational psychologists' perspectives on the treatment of autism spectrum disorder (ASD) in South Africa and aims to gain a comprehensive understanding of the approaches and interventions favoured by a sample of South African educational psychologists in addressing the diverse needs of children with ASD.

Autism spectrum disorder (ASD) is a neurological and developmental condition in which the individual experiences difficulties with communication and social interaction, and engages in repetitive behaviours (Hodges et al., 2020; Robinson et al., 2017; Tsui & Rutherford, 2014). The identification and diagnosis of ASD involves consulting various professionals and having them apply a range of tests and diagnostic measures. Despite the complex diagnostic process, it is crucial to recognize ASD symptoms early to enhance management through timely intervention (Cleveland Clinic, 2023; Remington et al., 2007). As noted in numerous studies, positive outcomes have been observed with early intensive behavioural intervention in ASD (Chung et al., 2024; Guler et al., 2017; Healy & Lydon, 2013; Reichow et al., 2014; Remington et al., 2007). This approach has demonstrated effectiveness in reducing the severity of core ASD symptoms, potentially leveraging neural plasticity in children (Dawson, 2008; Dawson & Zanolli, 2003; Sullivan et al., 2014).

ASD poses many challenges globally, with the nature of these challenges shaped by cultural, societal and regional factors. In various regions, critical components such as timely diagnosis and intervention encounter delays and limitations, contributing to challenges to optimal development (Guler et al., 2017; Hahler & Elsabbagh, 2014; Hussain et al., 2023; Samms-Vaughan, 2014). Persistent stigma and misconceptions surrounding ASD result in social isolation and discriminatory practices against individuals on the autism spectrum (Guler et al., 2017; Han et al., 2021; Turnock et al., 2022). Furthermore, there are widespread difficulties associated with providing essential resources, including trained professionals, specialized educational programmes and therapeutic services; global discrepancies and research gaps further amplify these problems (Aderinto et al., 2023; Fraatz & Durand, 2021; Guler et al., 2017; Hahler & Elsabbagh, 2014). There is also a paucity of research concerning ASD and its treatment in middle- and low-income countries, with South Africa facing particular challenges because of limited resources and infrequent diagnoses (Aderinto et al., 2023; Guler et al., 2017; Rieder et al., 2023). The scarcity of research highlights the critical need to comprehend the feasibility and effectiveness of ASD interventions and treatments in South Africa (Guler et al., 2017; Samms-Vaughan, 2014).

Within this context, educational psychologists play a pivotal role in supporting ASD children. Their responsibilities encompass enhancing the child’s functioning in the school environment; collaborating with and supporting parents in recognizing, accepting, and managing their child's difficulties; and recommending, developing, and administering strategies and therapies tailored to facilitate the optimal performance of ASD children (Donald et al., 2010;

Farrell, 2004). As integral members of the treatment team, educational psychologists collaborate with other professionals to identify and address barriers to learning (Donald et al., 2010; Farrell, 2004). Moreover, they contribute to breaking stigmas associated with ASD by increasing knowledge and awareness, and playing a supportive role in the lives of ASD children (Keenan & Dillenburger, 2021).

While the crucial role of educational psychologists in supporting individuals with ASD is recognized, there exists a significant knowledge gap regarding the perceptions of the treatment of ASD among South African educational psychologists. Little is known about their views on working with ASD children in the complex and highly individualized South African multicultural and multilingual context. This research thus aims, at a theoretical level, to contribute to a more comprehensive understanding of ASD treatment, offering potential directions for future research. On a practical level, the study seeks to contribute to the formulation of treatment guidelines for ASD children by educational psychologists in South Africa, enhancing their training in this regard.

Enhanced knowledge in this domain may play a pivotal role in refining best practices for ASD intervention and contribute to appropriate training for educational psychologists. It is hoped that exploring the perspectives of practising educational psychologists with first-hand experience of working with ASD children will provide valuable insights and important information that can augment understanding of available treatment options and their effective utilization, and of the roles played by educational psychologists in the ASD treatment process.

Aims and objectives

The primary aim of the study was to explore a sample of South African registered educational psychologists' perspectives on and experiences with the treatment of ASD children in the South African context. This included ascertaining how aware the educational psychologists in the sample were of available treatments, and how they determined and evaluated the effectiveness of the treatments or interventions for ASD that they did use. Additionally, the study examined the factors that influenced psychologists' decision-making for intervention or treatment when working with ASD children, their level of involvement at each stage of the treatment process, and their roles in relation to other professionals engaged in this process. Furthermore, it explored the challenges faced by ASD children and their parents when seeking and obtaining treatment in the South African context. The research also sought to identify common strategies employed by educational psychologists when treating ASD children in South Africa and the difficulties they encountered when doing so.

Structure of the report

This initial chapter has thus far outlined the study's background, rationale and aims. The next chapter offers a review of existing literature as contextualized by the research questions. The third chapter focuses on the methodology of the study, covering key aspects such as research design, sample selection, data collection methods, ethical considerations and data analysis. The fourth chapter presents and discusses the findings from the data. Chapter Five presents conclusions drawn from the findings and discusses their implications. It adumbrates the strengths and limitations of the study and suggests directions for future research.

Chapter 2: Literature review

In this chapter, a comprehensive exploration of the literature about the treatment of autism spectrum disorder (ASD) children will be undertaken. The review will follow a structured approach to provide a thorough understanding of the multifaceted landscape of ASD treatment, both internationally and in South Africa. I will begin by providing a clear definition and concise explanation of ASD, and discuss the available treatment options as documented in the research literature. Factors guiding practitioners in selecting particular treatments will be highlighted and consideration of contextual factors and flexibility in interventions for individuals with ASD will be emphasized. The review will then discuss the global issue of the shortage of mental health professionals equipped with specialized training in ASD treatment and intervention delivery, and the various factors that impact the choice of treatments or interventions in the South African context. The role of professionals engaged in the treatment process – including the dynamics of teamwork and the parent-professional relationship that contribute to the efficacy of interventions or treatments – will then be examined. The accessibility of resources and services essential for ASD treatment in South Africa will be discussed, including the views of South African parents on the challenges they face. Finally, the focus will shift towards the rationale for the current study and how it aims to contribute to a greater understanding of South African educational psychologists' perspectives on the treatment of ASD in South Africa.

Definition and brief explanation of ASD

"Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social communication and the presence of restricted interests and repetitive behaviours" (Hodges et al., 2020, p. S55). It is an umbrella term covering autism, Asperger's syndrome, Rett’s disorder, childhood disintegrative disorder, and non-specified developmental disorders (Faras et al., 2010; Tsui & Rutherford, 2014). ASD affects the ability of children to understand and interact with their environment (Bölte et al., 2018). The symptoms usually start to appear at a young age and continue, developing and changing throughout the person’s life (Centers for Disease Control and Prevention, 2022). ASD can sometimes be identified in a child aged 18 months or younger. A diagnosis by a qualified healthcare professional can be considered to be valid after age two. Many children, however, are not given a definitive diagnosis until they are much older. In some cases, people do not receive a diagnosis until they are adolescents or adults (Centers for Disease Control and Prevention, 2022).

The signs and symptoms of ASD range from mildly to severely disabling, and each child is different (Cleveland Clinic, 2023; Okoye et al., 2023; Tsui & Rutherford, 2014). However, certain signs may be indicative of a young child being on the ASD spectrum. ASD children find it difficult to make use of nonverbal types of communication such as waving or pointing; however, they also find verbal communication challenging, such as babbling or saying single words among younger children, or using single words or two-word phrases among older children (Cleveland Clinic, 2023; Tsang et al., 2019). Making or maintaining eye contact, and expressing their feelings or understanding the feelings of those around them are among the social difficulties faced by ASD children (American Academy of Pediatrics, 2023; Tsang et al., 2019). Repetitive and restrictive behaviours that are common among ASD children include rocking back and forth, flicking fingers, and hand-flapping, as well as forming routines or rituals and becoming very agitated when these routines are disrupted (American Academy of Pediatrics, 2023). Many children with ASD have unusual reactions to sound, smell, taste and sometimes even the way certain things feel; they may also react in unusual ways when engaging with others (Barthélémy et al., 2019; Hyman et al., 2020). Some ASD children are extremely particular about the order of objects or toys as they line them up repetitively, and if the order changes, it makes them angry (Hyman et al., 2020). It is common for children with ASD to experience co-occurring conditions such as attention-deficit/ hyperactivity disorder (ADHD), anxiety, sleep disorders, and behavioural disorders such as self-injury and refusing food. These may well have a negative impact on both them and their family (Barthélémy et al., 2019; Hyman et al., 2020).

A comprehensive examination of global practices indicates that the current diagnosis of ASD typically involves assessment by multidisciplinary teams or proficient individual specialists, such as paediatricians, developmental paediatricians, child psychiatrists and psychologists. The diagnostic process varies, depending on the healthcare systems and treatment resources available within each country (Hyassat et al., 2023; Ivanov et al., 2021).

It has been estimated that in South Africa there may be over 200,000 children of school-going age who are, to some extent, on the ASD spectrum (Van der Watt, 2020), though accurate information is hard to come by. This is because ASD is under-diagnosed owing to the scarcity of available tools, especially when South Africa is compared with well-resourced countries that have multiple 'gold-standard' tools for screening and diagnosing ASD (Remington et al., 2007; Ruparelia et al., 2016). ASD is difficult to detect and diagnose because it requires consulting different professionals and using an array of tests and diagnostic measures. There is no definitive, objective measure and diagnosis is mainly achieved through observation. Such difficulties can make it harder for diagnoses to occur early (Lord et al., 2018).

Despite this, it is extremely important to be aware of the symptoms of ASD to optimize managing the condition through early intervention programmes (Cleveland Clinic, 2023; Remington et al., 2007). Early intensive behavioural intervention has revealed positive results for

ASD, as reported by numerous studies (Chung et al., 2024; Guler et al., 2017; Healy & Lydon, 2013; Reichow et al., 2014; Remington et al., 2007). Early diagnosis is associated with better outcomes because it gives parents and children a chance to plan and come to terms with the diagnosis, which means that children can receive suitable treatment earlier (Cervera et al., 2011). Early intensive behavioural intervention has also been shown to decrease the level of severity of core ASD symptoms and increase language development, social skills, cognitive functioning and adaptive behaviours in young children (Chung et al., 2024; Guler et al., 2017; Healy & Lydon, 2013; Reichow et al., 2014; Remington et al., 2007). The implementation of intensive programmes provided by highly qualified professionals is the main source of evidence for the effectiveness of early ASD intervention (Guler et al., 2017). These best practices have high implementation costs and pose problems with sustainability and viability in low-resource environments, including in South Africa where ASD diagnosis and intervention are often delayed and remain a problem (Guler et al., 2017; Makombe et al., 2019; Remington et al., 2007).

Types of ASD treatment

ASD treatment can briefly be defined as “any medical or therapeutic intervention for children with ASD” (Wetherston et al., 2017, p. 117). Because children with ASD have many emotional, psychological, social, sensory and learning needs, it is of the utmost importance that those offering ASD treatment are acquainted with a variety of approaches, interventions and strategies to achieve optimal treatment outcomes for such children (Department of Education, 2015; Robinson et al., 2017). It is important to highlight that there is no single treatment approach for ASD, and there are many factors that need to be considered when selecting an ASD treatment regime (Keenan & Dillenburger, 2021). Among the factors that determine the treatments that practitioners choose are family dynamics, the individual’s social, sensory, and physical environment, the available resources, the characteristics of the child and the practitioner’s knowledge of possible treatments (Robinson et al., 2017; Salgado-Cacho et al., 2022; Wetherston et al., 2017). There is a wide variety of treatments that can be used (Barthélémy et al., 2019).

The treatment options include evidence-based interventions (EBI), which have been established through formal research as effective interventions for ASD (Robinson et al., 2017; Wetherston et al., 2017). A survey involving 146 educational psychology practitioners in the UK and Ireland explored their utilization of 31 evidence-based practices for ASD (Robinson et al., 2017). The findings revealed that, on average, approximately 30% of the psychologists’ professional workload was dedicated to implementing interventions for students with ASD. They acquired their information about ASD interventions primarily from colleagues or the internet, as well as journal articles and reports (Robinson et al., 2017). Among the commonly employed evidence-based interventions were visual supports, social stories, reinforcement, antecedent-based interventions, prompting, and social skills training. These interventions were preferred due to their ease of integration into mainstream school settings; often requiring minimal additional support or technical training, they could be implemented by class teachers or support assistants (Robinson et al., 2017). Conversely, interventions such as DTT, exercise, PRT, LEGO® therapy, technology-aided instruction, extinction, time delay, and video modelling were infrequently or never utilized by the psychologists in the sample. Such interventions typically demand a higher level of individualized support from extensively trained adults, presenting challenges in school-based settings because of the specialized knowledge or resources required (Robinson et al., 2017).

Many evidence-based interventions for ASD rely on the principles of behavioural therapy that focus on “modifying behaviour through positive reinforcement, repetition, and consistency, all based on learning theory principles” (Aderinto et al., 2023, p. 4412). For example, prompting (using cues and positive feedback) occurs when an individual with ASD is encouraged or taught to engage in positive behaviour that does not otherwise occur to him or her (Halbur et al., 2020). Various types of prompts can be employed, including physical assistance or gestures, verbal instructions or subtle verbal hints, and visual prompts such as photographs and checklists (Hayes, 2013). It is crucial to tailor the selection of prompts to match the individual needs of the ASD child and to gradually reduce and phase out prompts to foster the child’s independent mastery of the targeted behaviour without continual reliance on adult guidance (Hayes, 2013). Various prompt-fading techniques have been successful in teaching skills to individuals with ASD. These include prompt delay, most-to-least prompting, and least-to-most prompting (Halbur et al., 2020). Prompt-delay procedures involve gradually increasing the time between prompts (Halbur et al., 2020; Hayes, 2013). Most-to-least (MTL) prompting involves initially providing more intrusive prompts during instruction, which are gradually reduced to less intrusive prompts, to encourage independent correct responses (Halbur et al., 2020). Least-to-most (LTM) prompting involves presenting increasingly intrusive prompts within a learning opportunity if the participant does not respond to an instruction within a set time (Halbur et al., 2020).

Reinforcement is the creation of a relationship between learner behaviour and the consequences of that behaviour (Malaco et al., 2020; Neitzel, 2009). Only if the consequence enhances the likelihood that a behaviour will occur in the future, or at the very least be maintained, is the relationship deemed reinforcement (Dart & Melendez-Torres, 2020; Malaco et al., 2020; Neitzel, 2009). The primary objective of reinforcement is to assist learners with ASD to acquire new skills and to maintain them over time in various contexts involving various people (Malaco et al., 2020; Neitzel, 2009). Reinforcement is an essential element often employed in conjunction with other evidence-based approaches such as prompting, time delay, functional communication training and the differential reinforcement of other behaviours (Malaco et al., 2020; Neitzel, 2009). When reinforcement is personalized for a specific learner with ASD and responds to the learner's use of a target skill or behaviour, it is most successful (Neitzel, 2009).

Another technique is modelling, which occurs when skills or behaviours are demonstrated to an individual with ASD to get them to imitate this behaviour (Tsui & Rutherford, 2014). Using modelling as an intervention has been shown to be effective in instructing individuals with ASD who possess good imitative abilities and are inclined toward visual learning and thinking (Corbett & Abdullah, 2005; Tsui & Rutherford, 2014). Video modelling, a form of modelling where videos are used to demonstrate targeted skills, has demonstrated notable advantages (Ganz et al., 2011; Tsui & Rutherford, 2014). This method is particularly advantageous in instructing individuals with ASD across various skill domains, such as enhancing vocalization and communication, social and play skills, emotion processing, perspective taking, academics, and adaptive behaviour (Corbett & Abdullah, 2005; Tsui & Rutherford, 2014). Video modelling serves as a means of learning through social models without the necessity for initial face-to-face interaction (Corbett & Abdullah, 2005). Several researchers contend that interventions employing video modelling, owing to the visual medium, inherently motivate and naturally reinforce individuals with ASD (Ambrose, 2017; Corbett, 2003; Corbett & Abdullah, 2005; Wahoski, 2015).

Research indicates that teaching social scripts to children with ASD through modelling, prompting and reinforcement leads to improved interactions with peers and adults (Ganz et al., 2008). Social scripts present written or visual summaries of the steps that can be followed by an individual with ASD to carry out social interactions or social tasks (Scheibel et al., 2021). Social scripts that guide appropriate responses in social contexts and illustrate ongoing communication between individuals offer valuable support for children (Ganz et al., 2008; Luetkemeier, 2023; Meadan et al., 2011). Various forms of visual support have also proven beneficial for young children with ASD (Boggs, 2016; Cohen & Demchak, 2018; Meadan et al., 2011; Rutherford et al., 2019; Simmons et al., 2020). The term "visual supports" refers to a variety of concrete, reasonably inexpensive resources that are appropriate for a range of developmental levels, such as objects, pictures, and picture symbols. These resources are used to support receptive or expressive communication as well as to decrease anxiety, increase predictability, and support the understanding of routines and social expectations (Rutherford et al., 2023). Visual supports are commonly embedded in daily schedules, scripts or task analyses. Structuring the environment with visuals has been shown to enhance the independent functioning of children with ASD in their natural surroundings, reducing the need for adult prompts during routine tasks (Boggs, 2016; Cohen & Demchak, 2018; Meadan et al., 2011; Simmons et al., 2020). Visual supports are frequently incorporated into diverse interventions, whether at home or within a school setting (Rutherford et al., 2023; Simmons et al., 2020). A pilot study conducted by Rutherford et al. (2023) sought to assess the feasibility and effectiveness of a visual support intervention specifically designed for home use. The findings of the study indicated that involving parents in a visual support intervention at home was not only viable but also enhanced accessibility to resources and information for families.

Visual schedules serve multiple purposes, including indicating ongoing activities, predicting the next steps, signalling the conclusion of an activity, and highlighting any potential modifications to the regular schedule (Boggs, 2016; Meadan et al., 2011; Simmons et al., 2020). Visual scripts, which encompass written scenarios or skits, offer children tools to initiate conversations and engage in social interaction. For children exhibiting social avoidance, indifference or awkwardness, visual scripts may prove particularly valuable in cultivating social skills (Ganz, 2007; Ganz et al., 2008). Social stories, as a specific type of visual script, are effective in elucidating social concepts that a child may struggle to fully comprehend or may misinterpret. These narratives commonly focus on illustrating appropriate social behaviours and mitigating inappropriate ones (Ganz et al., 2008). Visual scripts have been shown to be beneficial in helping children comprehend social situations, find solutions to challenges, and prepare for conversations. To enhance children's independence in task performance, visual task analysis can be implemented as a step-by-step support (Meadan et al., 2011). A study by Ganz et al. (2008), which focused on verbal elementary-age children with ASD, found that visual cues and scripts could enhance communicative speech while reducing perseverative speech. Furthermore, the use of visuals was noted to be less intrusive and socially stigmatizing than verbal prompts or reminders. Additionally, visual strategies proved to be less disruptive to other students in shared classrooms where prompts and cues were employed (Ganz et al., 2008). Ganz et al. (2008) argue that teachers stand to benefit from these approaches because of their ease of application and minimal resource requirements.

Substantial research has concentrated on devising effective instructional strategies for ASD students (Geiger et al., 2012; Odom et al., 2021; Sigafoos et al., 2019). Studies have shown that applying discrete trial teaching (DTT) can enhance language, social, academic and play skills, making it a prominent choice for individuals with ASD (Bogin, 2008; Geiger et al., 2012; Leaf et al., 2016). DTT often serves as a foundational method within applied behaviour analysis (ABA) interventions (Leaf et al., 2016; Geiger et al., 2012; Odom et al., 2021). It can be integrated with other techniques to teach various skills to individuals with ASD (Leaf et al., 2016). Each discrete trial comprises three main elements: a discriminative stimulus (typically a therapist's instruction), the learner's response, and a consequence (either reinforcement or punishment) determined by the therapist's evaluation of the response. Additionally, therapists may offer prompts before the learner's response to enhance correctness probability (Leaf et al., 2016). Traditionally, DTT follows a rigid structure, dictating actions to a therapist according to a set protocol. In contrast, a progressive DTT approach allows therapists flexibility, enabling real-time adjustments based on various factors like individual responses and past history (Leaf et al., 2016; Wong, 2019). Nevertheless, current practices typically involve a conventional approach to DTT, where therapists are constrained by strict protocols and lack the freedom or encouragement to assess and adapt to children's unique needs and circumstances in real time (Leaf et al., 2016).

Another type of intervention that supports social development for individuals with ASD is the play-based intervention, such as LEGO®-based therapy, originally introduced by LeGoff in 2004. Such approaches, applicable in both individual and group settings, are designed to create opportunities for developing social skills – under the facilitation of a therapist – in a less artificial way (Narzisi et al., 2021; Ramalho & Sarmento, 2019). Variations include diverse theoretical foundations, delivery methods, conceptualizations of play and assessment designs, with some interventions adopting an instrumental approach, while others, like LEGO®-based therapy, emphasize alignment with a child's voluntary play interests (Narzisi et al., 2021).

LEGO® therapy for ASD and related disorders is grounded in two fundamental assumptions (Narzisi et al., 2021; Vegni et al., 2023). First, it recognizes that many ASD children exhibit advanced skills and interest in using Lego®. Secondly, the therapy leverages the shared outcome of collaborative LEGO® building to encourage social interaction. The structured building tasks in LEGO® therapy foster problem-solving skills, encouraging individuals with ASD to plan and create using LEGO® bricks (Narzisi et al., 2021; Vegni et al., 2023). This enhances cognitive abilities such as logical thinking and planning (Vegni et al., 2023). Notably, LEGO® therapy taps into the visual-perceptual strengths often observed in individuals with ASD and promotes the development of visual-spatial skills, including pattern recognition, understanding spatial relationships, and refining fine motor coordination (Ramalho & Sarmento, 2019; Vegni et al., 2023). It also provides a platform for practising and improving executive functions such as working memory, self-regulation and attention (Boylan, 2019; Vegni et al., 2023). Participants engage in tasks that require focused attention, memory recall and adaptability, fostering cognitive skills crucial for building tasks but also generalizable to other areas of life (Vegni et al., 2023). When conducted in small groups, the therapy encourages collaborative efforts towards a common goal. This enhances the skills required for cooperation and social interaction, as well as for communication and social cognition (Narzisi et al., 2021; Vegni et al., 2023). The cognitive skills honed through LEGO® therapy or other play-based interventions demonstrate potential generalization beyond therapy sessions. As individuals practice social interaction and cognition, the skills should transfer to real-life situations. This supports the development of adaptability and flexibility across various contexts (Narzisi et al., 2021; Vegni et al., 2023). Despite the potential benefits, research on play-based interventions like LEGO® therapy reports significantly variable results and this type of intervention does not always lead to positive benefits for the individual with ASD (Narzisi et al., 2021).

Some ASD interventions consist of a combination of evidence-based interventions. For example, the ‘social communication, emotional regulation and transactional support’ (SCERTS) intervention concentrates on social communication, emotional regulation and transactional support, incorporating several techniques in order to develop individualized programmes to support ASD children through assisting their families, parents, and teachers to work together (Robinson et al., 2017; Walworth, 2007). Another combination intervention is the ‘treatment and education of autistic and communication-related handicapped children’ (TEACCH), which places emphasis on structured support for social communication, visual information to supplement verbal communication, and deals with problems regarding attention and executive function through external organizational support (Autism Speaks, 2022c; Robinson et al., 2017).

According to Wetherston et al. (2017), evolving treatments for ASD include ‘augmentative and alternative communication’ (AAC), ‘picture exchange communication system’ (PECS), and the ‘developmental, individual differences, and relationship-based model’ (DIR)/floortime. These treatments are inexpensive but are deemed unestablished because of the absence of evidence to support their success (Wetherston et al., 2017).

Augmentative and alternative communication (AAC) is a particular form of assistive technology used to increase and expand communication, independence and social interactions with others (Autism Speaks, 2022b; Crowe et al., 2021). It offers an effective communication method for individuals diagnosed with ASD, particularly those facing challenges in utilizing traditional speech because it encompasses a range of communication systems and aided methods such as picture boards, speech-generating devices and picture exchange systems, as well as unaided techniques like gestures and manual signing with Makaton or Sign Language (Beukelman & Mirenda, 2013; Ganz, 2015). Some individuals on the ASD spectrum encounter challenges in using their vocal muscles for speech production, so that pointing and manual signs are more accessible (Maue, 2022). Visual aids such as pictures are beneficial for ASD individuals with auditory processing difficulties, encouraging them to leverage their visual-spatial skills (Maue, 2022). According to Brain and Mirenda (2019), augmentative and alternative communication (AAC) serves as a tool for young children to communicate with parents even before mastering verbal language. For children with delayed speech development, AAC devices can assist with learning appropriate communication methods, such as making requests or expressing wants and needs.

Contrary to concerns, as indicated by Hyman et al. (2020), AAC usage does not impede speech development; rather, it may promote social interaction and enhance communication comprehension. Moreover, the integration of verbal and nonverbal communication in AAC can facilitate the initiation of speech (Hyman et al., 2020; Maue, 2022). Brain and Mirenda (2019) emphasize that the absence of a communication method in children with autism can result in frustration, behavioural challenges, and difficulties in learning and social interaction (Maue, 2022). The incorporation of AAC can contribute to the advancement of communication skills, language development, and the mitigation of frustration and challenging behaviours in children with autism (Crowe et al., 2021; Moller, 2023). These communicative means serve as tools to empower individuals to articulate thoughts, express needs, and convey emotions, thereby fostering social connections and instilling a sense of independence (Moller, 2023).

The picture exchange communication system (PECS) was originally developed for non-verbal ASD children as a way of teaching functional communication through pictures (Crowe et al., 2021; Thiemann-Bourque et al., 2016). PECS is a process in which the child exchanges a picture for an item the child wants and is prompted to try and say the word of the item desired. This builds on association and helps to increase communication and speech outcomes (Thiemann-Bourque et al., 2016). The user-friendly design of PECS facilitates its accessibility for children with ASD. The prerequisite skills for initiating PECS training are minimal. In comparison to other communication systems, PECS is cost-effective. Furthermore, the system is characterized by its lightweight and portable nature: it is easy to handle and transport because of the manageable nature of the cards (Murray, 2014). An investigation was carried out involving a 4-year-old boy exhibiting high levels of aggression who was introduced to the PECS system (Lund, 2016). The school staff initially faced challenges in assessing his cognitive abilities owing to his aggression during assessments. To address this, the researchers facilitated free play with the communication board in close proximity. The study revealed a reduction in aggressive behaviour during play activities following the introduction of PECS. Concurrently, there was an increase in the use of picture communication. The researchers concluded that heightened communication provided the 4-year-old with the choices and control he sought, ultimately contributing to the observed decrease in his aggressive behaviour (Lund, 2016).

The developmental, individual differences and relationship-based model (DIR)/floortime encourages adults to play and interact with children on their level. The aim of this intervention is for adults to assist the child in increasing their “circles of communication” through making use of the child’s interest-based activities. The adult makes their way into the child’s games by following the child’s lead (Autism Speaks, 2022a; Thayer, 2016). Through the back-and-forth play, the child’s base for engagement, shared attention, and problem solving is strengthened, while emotional thinking and two-way, complex communication is enhanced (Autism Speaks, 2022a; Divya et al., 2023).

Wetherston et al. (2017) also describe various developmental approaches, naturalistic behavioural approaches and alternative treatment approaches that are sometimes used when working with ASD children. These include relationship development intervention, operant conditioning-based approaches, milieu teaching, speech-language therapy, sensory-motor therapies, vitamin therapies and diet-based interventions. The extent to which different treatments are used varies according to the extent to which the practitioner giving the treatment is familiar with the treatment, their previous experiences with the treatment, and other factors (Robinson et al., 2017). Naturalistic behavioural approaches encompass elements such as tailoring interventions to the child’s initiatives, implementing interventions in everyday settings, and employing strongly appealing incentives. Alternatively, there are treatments rooted in applied behavioural analysis (ABA), including pivotal response training and incidental teaching, which are guided by ABA principles (Wetherston et al., 2017).

Applied behavioural analysis (ABA) therapies commonly address a range of developmental domains, encompassing cognition, communication, physical motor skills, adaptive skills and social skills (Gitimoghaddam et al., 2022; Tiura et al., 2017). The instructional approach involves breaking down skills into manageable tasks, providing the minimum support required for success, and utilizing a reward system to reinforce desired behaviours (Aderinto et al., 2023; Tiura et al., 2017). Grounded in behavioural and cognitive behavioural theories, these methods are implemented by trained professionals in individualized sessions with participants. Numerous studies affirm that ABA stands out as one of the most extensively researched and validated approaches for effectively treating children diagnosed with ASD (Aderinto et al., 2023; Foxx, 2008; Makrygianni et al., 2018; Tiura et al., 2017). Nonetheless, there is research indicating that ABA concentrates exclusively on observable behaviour rather than internal constructs such as thoughts, emotions or pain. This emphasis has been criticized for its potential to result in psychological and physical abuse, raising concerns about the ethical imperative to prioritize the principle of “do no harm” (Shkedy et al., 2021). Moreover, studies have indicated that ABA therapy often entails significant repetition, which can be challenging for children, and the acquired skills may not necessarily transfer effectively to different situations (Lord, 2023).

In the context of ASD treatments, medication is prescribed to target distressing and atypical behaviours and to help individuals respond more positively to other strategies implemented as part of their treatment (Louw et al., 2013). Although no medication is capable of curing ASD or addressing all of its symptoms, studies indicate that the efficacy of medication is maximized when it is employed in conjunction with behavioural therapies (Maniram et al., 2023). However, the accessibility of pharmacological treatments for ASD within South Africa remains limited, as highlighted by Louw et al. (2013) and Maniram et al. (2023). There is a general lack of research in Africa on the efficacy and safety of psychotropic medications used to target specific ASD symptoms (Aderinto et al., 2023; Louw et al., 2013). Accessibility to medication is also affected by a shortage of qualified healthcare professionals, poverty and certain cultural factors (Aderinto et al., 2023; Louw et al., 2013; Norris et al., 2016).

Families may decide to explore changes in diet, herbal remedies, and other complementary non-conventional treatments such as acupuncture and massage therapy (Aderinto et al., 2023; Louw et al., 2013). While some attest to the benefits of these approaches, there is limited scientific evidence for their effectiveness in treating ASD, certainly within the African population (Aderinto et al., 2023; Louw et al., 2013). Maniram et al. (2023), however, argue that combining vitamins, minerals, dietary supplements and other medications that manage ASD symptoms with other forms of non-medical treatment may enhance therapeutic outcomes for children diagnosed with ASD in South Africa (Maniram et al., 2023).

Factors that affect choice of treatment

There is a wide array of possible treatments for ASD that practitioners can use individually or in combination (Lofthouse et al., 2012). The extent to which different treatments are used varies according to the extent to which the practitioner giving the treatment is familiar with the treatment, their previous experiences with treatment, the resources that are available to support treatment, the characteristics of the child, and the role played by caregivers and other family members (Robinson et al., 2017; Salgado-Cacho et al., 2022; Wetherston et al., 2017). Previous research has shown that some of the factors that affect practitioners' choice of treatment include the best evidence available, the characteristics, values and preferences of the client, the client's economic and social resources and the practitioners' experience, skills, and knowledge in determining what works best for the child (Robinson et al., 2017; Spring et al., 2008). The affordability and availability of treatments, treatment requirements, the individual needs of the child, culture, and the parents' interpretation of symptoms are other factors that may affect treatment choice (D'Angelo, 2011; Mandell & Novak, 2005; Robinson et al., 2017). Reports from parents indicate that the availability of treatment, costs, level of trust in health-care workers and preferred parenting practices influence their choice of treatment for their child (Guler et al., 2017). Parents can be overwhelmed by all the choices of alternative treatments, and this shows the need for collaboration between parents and professionals to create a treatment plan that suits the abilities of the child as well as the family environment (Bowker et al., 2010; Karst & Van Hecke, 2012; Robinson et al., 2017).

The involvement of parents or caregivers during treatment is crucial for maintaining continuity in the home environment (Salgado-Cacho et al., 2022). While many ASD interventions commonly occur in a therapist's office or at school, it is essential for families to play an active role in the treatment process and some treatments can only be successful if they also occur in the home environment (Rojas-Torres et al., 2020; Salgado-Cacho et al., 2022). Through training, families can extend speech and language therapy, occupational therapy, and physical therapy to the home setting. This includes participating in goal setting, collaborating as part of the treatment team, contributing to programme delivery, and being involved in the treatment evaluation process (Salgado-Cacho et al., 2022). Studies have indicated that the engagement of parents enhances the long-term efficacy of the treatment (Burrell & Borrego, 2012; Rojas-Torres et al., 2020; Salgado-Cacho et al., 2022; Wetherston et al., 2017). Several studies conducted in lower- to middle-income countries also advocate increased caregiver participation in delivering interventions as a cost-effective strategy for service provision and overcoming capacity limitations (Carr & Lord, 2016; Fang et al., 2022; Guler et al., 2017; McConkey, 2022). The degree to which parents and caregivers are willing to be involved in treatment and the resources they have for this therefore play a major role in the types of treatments chosen for ASD (Guler et al., 2017).

Research was conducted in the eThekwini Metropolitan Municipality to explore parental perspectives and awareness concerning treatments for children with ASD (Wetherston et al., 2017). The findings revealed that over half of the parents were either unfamiliar with or had limited knowledge about the specific treatments under consideration. Additionally, 68% of the participants expressed challenges in accessing ASD treatment facilities and healthcare professionals, citing perceptions of high treatment costs. One parent stated that there was so much on the internet yet so few treatments available in South Africa. Another parent expressed difficulty in finding treatment in her home language. Many parents experienced a lack of government support and funding for external (out-of-school) therapy. They mentioned that medical aid did not cover most of the costs as autism was not recognized as qualifying for primary medical benefits (Wetherston et al., 2017). Medical aid schemes in South Africa usually do not include coverage for the substantial costs of disability-related intervention services, leaving families to bear the financial responsibility on their own (Erasmus et al., 2019).

Owing to all the factors that affect treatment, and owing to the fact that there are many different treatments that often need to be used together to get an effective outcome, ASD treatment tends to be team-based and to draw on different types of professionals, with each professional playing a complementary role in the team (Dillenburger et al., 2014; Karst & Van Hecke, 2012; Wetherston et al., 2017).

Team-based treatment

Individuals with ASD need the expertise of professionals from various disciplines – such as psychologists, speech and language therapists, physicians, occupational therapists and special educators – who can work together to provide a comprehensive intervention (Vivanti & Hamilton, 2014). Dillenburger et al. (2014) and Wetherston et al. (2017) emphasize that effective interventions for ASD require collaboration and teamwork between different types of practitioners and with the family of the ASD child. Similarly, Sinai-Gavrilov et al. (2019) found that ASD treatment was most effective when there was mutual learning and a sense of professional support among people working together from different disciplines in a multidisciplinary team. Empirical evidence also suggests that team-based treatment is one of the most effective forms of treatment for ASD, and one of the best-suited treatment models for developing an individualized approach that benefits the child (Sinai-Gavrilov et al., 2019).

According to the Health Professions Act, 2011 (Section 5 (a), Regulation No. 704 of 2011), the scope of practice of an educational psychologist is: "assessing, diagnosing, and intervening in order to optimize human functioning in learning and development; assessing cognitive, personality, emotional, and neuropsychological functions of people in relation to the learning and development in which they have been trained". Educational psychologists' role in working with ASD children is to improve their functioning within the school environment; to liaise with and support parents and caregivers to recognize, accept, and manage their child's difficulties and impairments; to recommend, develop, and administer applicable strategies and therapies that can support ASD children to perform to the best of their potential; and to collaborate with other professionals in order to identify and address barriers to learning (Donald et al., 2010; Farrell, 2004). Educational psychologists play a supportive role in the life of an ASD child, while at the same time dispelling the stigmas attached to ASD through increasing knowledge and awareness (Keenan & Dillenburger, 2021).

Although educational psychologists take on an important set of roles in treating ASD children, it is not possible for one type of practitioner to be trained in every skill needed. Working with different specializations is therefore imperative for knowledge areas to be integrated and the best possible treatment approach developed (Dillenburger et al., 2014). Because the field of ASD is constantly developing, educational psychologists, speech therapists, occupational therapists and other professionals need to work together to keep up to date while also incorporating a holistic and individualized approach to optimize treatment (Robinson et al., 2017; Sadreddini, 2017; Vivanti & Hamilton, 2014). Educational psychologists cannot use only formal assessment tools to create a complete view of the child – they also need to gather information from parents and the school to enable them to produce a holistic assessment. In this way, the parents, extended family, teachers and other professionals all play an important role in the treatment of the child (Sadreddini, 2017).

Mental health professionals must tailor their approaches to integrate and support collaboration with parents because effectively communicating with and engaging parents in the therapeutic process is essential (Kalyva, 2013; Robinson et al., 2017; Wetherston et al., 2017). Parents who actively participate in collaboration with mental health professionals tend to enhance their abilities, knowledge and assertiveness, the better to help a child diagnosed with ASD (Catalano et al., 2018; Kalyva, 2013). Research indicates that active parental involvement in the child’s therapy not only fosters a sense of efficacy and personal control but also contributes to the parents’ becoming more effective, less stressed and less concerned (Kalyva, 2013).

Fostering a positive parent-professional relationship can also significantly alleviate stress during the process of diagnosing ASD (Elder et al., 2017; Kalyva, 2013). The results of a qualitative study carried out by Ho et al. (2013) indicate that there is a connection between how well families react to a diagnosis of ASD and the value of the parent-professional partnership (Elder et al., 2017). According to Wetherston et al. (2017), almost two-thirds of parents described their families as part of the treatment process through assisting in treatment, supplying transport, support and encouragement, and, very importantly, helping with decision-making. This participation contributed positively to parents’ coping during the intervention. Research has shown that optimism on the part of parents and families through the treatment process contributes positively towards the treatment outcome (Ho et al., 2013; Wetherston et al., 2017).

The shortage of mental health professionals for treating ASD

Although team-based treatment emphasizes the role of a range of specialists in the treatment process, international research highlights a persistent lack of mental health professionals with specialized training in ASD to deliver evidence-based services (Dückert et al., 2023; Hahler & Elsabbagh, 2014; Mathews et al., 2022). This shortage, despite the increasing prevalence of ASD over the past two decades, underscores the urgent need for training programmes to equip school psychologists effectively to address the needs of children with ASD and developmental delays. Existing resources, such as the standards set by professional and non-governmental organisations, can guide such training initiatives (Mathews et al., 2022). While most school psychology curricula adequately prepare future professionals for ASD diagnosis and assessment, there remains a knowledge gap in evidence-based treatment. A truly comprehensive curriculum should therefore cover early signs of autism, evidence-based screening and diagnostic assessment tools, treatment interventions, collaboration with families and teachers, and research methods (Mathews et al., 2022).

Despite ASD research having experienced significant growth worldwide in recent times, a significant portion of this research originates from the United States and other high-income nations, and a lack of evidence emanating from lower-income and middle-income countries indicates a noteworthy gap in understanding the ASD population globally. There is a particular need for ASD research in sub-Saharan African contexts, as knowledge about the prevalence and treatment of ASD in Africa lags behind that of other continents (Aderinto et al., 2023; Bakare &

Münir, 2011; Guler et al., 2017). Many individuals with ASD in Africa are in urgent need of services (Bakare & Münir, 2011; Guler et al., 2017).

In numerous African contexts, there is limited public education about ASD, and the healthcare approach often relies on traditional healing methods rooted in local customs (Aderinto et al., 2023; Guler et al., 2017; Zeleke et al., 2021). A lack of public education increases the risk of misinformation about ASD and exacerbates the knowledge gap among professionals responsible for diagnosing and managing ASD. Children with ASD in sub-Saharan Africa receive diagnoses later than their counterparts in the USA, particularly those from impoverished regions, due to a lack of awareness, stigma, and a shortage of professionals. The limited number of professionals available also makes it difficult to provide effective evidence-based treatment that is culturally responsive (Aderinto et al., 2023; Zeleke et al., 2021). As a result, parents or caregivers often take on the responsibility of providing interventions for ASD management. The multidisciplinary approach to treating ASD is uncommon in African countries, and there are no policies or guidelines for assessing, treating, educating and providing support for individuals with ASD (Zeleke et al., 2021). Creating awareness and providing training for educators and healthcare workers on ASD is therefore critically necessary in the region (Aderinto et al., 2023; Zeleke et al., 2021). Guler et al. (2017) note that when an intervention is transferred to a different context, it is crucial to consider contextually relevant factors and what modifications or adaptations may be needed to allow the intervention to work effectively.

ASD in the South African context

Although educational psychologists can take on several roles in ASD treatment, the actual roles that they perform can depend on circumstances, and, in the case of South African educational psychologists, these are very much determined by the unique context of South

Africa. There is a dire need for more knowledge about the prevalence and nature of ASD treatment in Africa as well as about issues specific to South Africa (Ametepee & Chitiyo, 2009; De Vries & Bölte, 2016; Franz et al., 2018; Ruparelia et al., 2016). The lack of adequately trained healthcare professionals, limited resources, and a shortage of diagnostic tools in low-income African countries contribute to constrained diagnostic capabilities, thereby impeding access to essential services and support (Aderinto et al., 2023; Kantawala et al., 2023). In South Africa, which has lower access to resources generally, the accessibility of services for ASD treatment is limited and ASD treatment options are scarce (Franz et al., 2018; Guler et al., 2017; Van Schalkwyk et al., 2016). There is limited access to specialist treatment providers and there can be long delays in diagnosis, with the average waiting period being about 18 months for a clinical diagnosis of ASD (Makombe et al., 2019; Mayosi & Benatar, 2014). This delay in clinical diagnosis has major implications for the outcomes of treatment plans, as the earlier the diagnosis, the better the treatment outcome (Erasmus et al., 2019; Guler et al., 2017).

Treatment costs for ASD can be prohibitive and there are very few cost-free ASD-intervention services in South Africa (Erasmus et al., 2019; Guler et al., 2017). Another factor that can affect treatment in South Africa is language, especially if treatment is not available in the first language of the child (Wetherston et al., 2017). Guler et al. (2017) identified language as a consideration during a study they conducted exploring the perspectives of South African parents of ASD children regarding early autism intervention. Caregivers in their study noted variations in language preference for therapeutic delivery, including a preference for instruction in English or the family’s home language, and uncertainty regarding which would be most effective. Caregivers expressed a desire for therapists to be aligned with families in terms of language. They also argued for consistency in the language of instruction across educational and treatment settings for children, believing that this approach would better prepare the children for school or external environments.

Guler et al. (2017) also found that the following all emerged as major contextual factors in their study: stigma, culture, parenting practices, location of treatments due to scarcity of skill transfer between the clinic and home, lack of resources, disordered home settings, insufficient space for those living in informal settlements, the costs of intervention because of limited financial support from the government, low income due to poverty and/or being a single parent, and the extra financial costs of rearing an ASD child. The respondents also highlighted the tendency of extended family, teachers, health care professionals and even outsiders to label their children “naughty”. Negative labels such as this arise from the lack of knowledge about ASD among South Africans. Caregivers observed that people might think that they or their child had been bewitched, apparently referencing a South African cultural belief that children with ASD were cursed (Guler et al., 2017). One caregiver recalled how her mother and other women in her community rejected the diagnosis of her son and held the view that spirits were trapped in his throat and needed to be released through customary cutting practices in order to enable him to speak (Guler et al., 2017). These findings support other studies indicating that ASD-related stigma has negative implications for the mental health and wellbeing of families (Turnock et al., 2022).

Evidence like this highlights the significant challenge posed by insufficient awareness and understanding of ASD within both the general population and healthcare profession throughout Africa (Kantawala et al., 2023). Cultural beliefs and the stigma associated with ASD in many African societies complicate the identification and diagnosis of ASD by regarding it as a spiritual ailment rather than a neurodevelopmental disability (Aderinto et al., 2023; Kwantawala et al., 2023). Traditional healing practices may be favoured as quick-fix solutions in the place of specialized medical care. Combatting stigma through partnerships between local communities and national and international organisations is desirable, but resources for this are limited (Aderinto et al., 2023; Guler et al., 2017; Kantawala et al., 2023).

Another problem in South Africa is finding suitable school placements, as many children with ASD wait for long periods before being able to enter formal education (Pillay et al., 2022b). To investigate this issue, Pillay et al. (2022b) conducted a qualitative study with ten ASD service providers in the Western Cape. The objective was to explore their perspectives on the issue of ASD school placement and identify possible solutions to address the educational needs of children with ASD. One participant provided a list of factors that they felt contributed to successful school placement for children with ASD, citing a coordinated approach to service provision and a consolidated and efficiently maintained database containing comprehensive information about each child (i.e. an information-rich waiting list) (Pillay et al., 2022b). The participants identified resource, competency, and contextual constraints that made placement difficult, and they emphasized the importance of building more capacity for working with children with ASD (Pillay et al., 2022b).

The current study

Treatment for ASD is very important and early intervention gives the best outcome for ASD children (Franz et al., 2018). International research has explored educational psychologists' perspectives on their role in the treatment of ASD (for example, Robinson et al., 2017). Yet this research is limited, and similar work does not appear to have been carried out in South Africa. Little is known about how educational psychologists in South Africa adapt common treatment practices to their environment, how they choose different treatments for ASD children, and how they engage with ASD children, their families, and other practitioners, especially in a context where the services available for ASD children fail to meet their needs in many ways (Guler et al, 2017; Tilahun et al., 2016). Additional difficulties have been associated with engaging with the healthcare system, such as inadequate support from healthcare providers (Guler et al., 2017).

Due to all of this, it is very important to gain a better understanding of how educational psychologists treat ASD in South Africa and how they perceive their experience of doing so. This information can contribute to appropriate training for educational psychologists to better prepare them for working with ASD patients and their families. Although some empirical studies have been conducted, they have mainly focused on parents' or caregivers' perspectives or the efficacy of certain interventions or treatments (Franz et al., 2017; Guler et al., 2017; Wetherston et al., 2017). There seems to be very little if any research devoted to South African educational psychologists' perspectives on the treatment of ASD children.

The primary aim of the current study was thus to explore a sample of South African registered educational psychologists' perspectives on and experiences of the treatment of ASD children in the South African context. This included ascertaining how the educational psychologists in the sample selected treatments or interventions for ASD and evaluated their effectiveness, as well as which other available treatments they were aware of. The study focused on the factors that they felt influenced their decision-making for intervention or treatment when working with ASD children, their level of involvement at each stage of the treatment process, and their roles in relation to other professionals engaged in the ASD treatment process. The study also explored their views of the challenges faced by themselves and the parents of ASD children in seeking and obtaining treatment in the South African context, while identifying potential mitigating factors. In sum, the research sought to identify common strategies employed by educational psychologists when treating ASD children in South Africa as well as the challenges faced by these professionals when offering treatment or intervention.

Research questions

The broad research question for the study was:

- What are educational psychologists' perspectives on and experiences with the treatment of ASD children in the South African context?

Specific research questions in the study were:

- What forms of treatment/intervention do educational psychologists choose when working with ASD children in South Africa and where did they source these from? How effective are these treatments perceived to be?
- What factors influence educational psychologists' decision-making for intervention/ treatment when working with ASD children?
- What level of involvement do educational psychologists have in each stage of the treatment process when working with ASD children?
- How do educational psychologists understand their role in the intervention/treatment process relative to others involved in the process (for example, parents, teachers, other professionals)?
- What challenges do educational psychologists feel ASD children and their parents face when seeking and/or obtaining treatment for ASD in the South African context? What factors, if any, do they feel could mitigate these?
- What strategies do educational psychologists have in common when treating ASD children in South Africa and what challenges do they face when offering treatment/intervention?

Chapter 3: Methods

In this chapter, a comprehensive methodological framework employed in this study to investigate educational psychologists' perspectives on the treatment of ASD children within the South African context will be presented. The research design will be discussed, including the rationale behind the qualitative approach, the selection of the sample, and the sampling strategy. The data collection process will be elucidated, emphasizing ethical considerations paramount to the safeguarding of participants' rights. The method of analysis, reflexive thematic analysis, will be explained, including how a nuanced understanding of diverse viewpoints was ensured. The researcher's commitment to producing trustworthy and credible findings, emphasizing the principles of transferability, dependability, and confirmability, will also be presented. Reflexivity and qualitative rigour were integral components throughout the research process, enriching the depth and validity of the study.

Research design

The primary aim of the study was to explore a sample of South African registered educational psychologists' perspectives of and experiences with the treatment of ASD children in the South African context. The design of the study was therefore qualitative, and an interpretive approach was used (Wagner et al., 2012; Stiles, 1993). The interpretive approach focused on understanding human experience in context through the perspectives of the participants, and its philosophical underpinnings were informed by hermeneutics as well as phenomenology (Wagner et al., 2012; Terre Blanche et al., 2006).

Qualitative researchers analyse language-based data by identifying and classifying themes (Stiles, 1993; Terre Blanche et al., 2006). Through qualitative methods, researchers can study particular issues in depth and openly as they recognize and try to comprehend themes that arise from the data (Terre Blanche et al., 2006). Qualitative research can be utilized for exploratory reasons as well as a means of developing enriched descriptions and explanations of human phenomena (Terre Blanche et al., 2006). Qualitative research is inductive, inclusive, and naturalistic and involves immersion in the details of the data as a means to uncover categories, themes, and relationships (Terre Blanche et al., 2006). Instead of testing theoretically derived hypotheses, it starts by discovering genuinely open questions (Terre Blanche et al., 2006). Qualitative researchers who approach the world from an interpretive perspective aim to create understanding regarding experiences, situations, and events as they arise within the real world (Terre Blanche et al., 2006). In the interpretive approach, reality is a personal or social construct that depends on the individual. Reality cannot be generalized to one common reality but is instead narrowed down to context, space, time, individuals, or groups in a given situation (Wagner et al., 2012). Interpretive researchers also implement an inter-subjective epistemology. This means that knowledge is subjective due to its being socially constructed (Wagner et al., 2012).

Within this research study, my interest was to explore educational psychologists' perspectives on the treatment of ASD children in South Africa. Additionally, I wanted to find out about their experiences and the challenges they faced while working with children on the spectrum in South Africa. Thus, a qualitative research design and interpretive approach were suitable for this type of research because they allowed me to understand and interpret the different subjective perspectives and experiences of the participants. In my study, I assumed that reality is constructed through exploring shared understandings, individual meaning, and multiple interpretations of phenomena; I also assumed that knowledge is unique to each individual and that this can be co-created inter-subjectively (Alharahsheh & Pius, 2020; Terre Blanche et al., 2006). This allowed me to interact with my participants to gain a deep and rich understanding of their experiences and perspectives as a way to understand their reality and develop shared knowledge of my topic (Alharahsheh & Pius, 2020; Terre Blanche et al., 2006).

The data was gathered using semi-structured interviews and analysed thematically, which also fit with a qualitative design and interpretive approach. Qualitative research enables problems to be assessed and dissected deeply and entirely as it uses detailed descriptions of the feelings and experiences of the participants (Terre Blanche et al., 2006). Another reason why I chose this research type, especially semi-structured interviews, was that the interviews were not narrowed down to particular questions but were guided and prompted by the researcher, and as new information arose, the research direction and structure could be revised, allowing for flexibility (Qu & Dumay, 2011). Due to this research being based on human experience, the data obtained was powerful and captivating (Terre Blanche et al., 2006).

In terms of limitations, the collection and analysis of qualitative data takes a lot of time and there are times when it can be intellectually and emotionally demanding (Terre Blanche et al., 2006). Qualitative research findings are not generalizable, and it can be difficult to account for their transferability (Terre Blanche et al., 2006). Subjectivity can be another limitation but is also a strength, as the researcher’s primary role is to analyze and interpret the data; thus, the researcher chooses what is seen as significant and insignificant, and interpretations of the exact same data can differ immensely (Anderson, 2010; Rahman, 2016).

Sample and sampling

To obtain the sample, I used purposive and volunteer-based sampling (Jupp, 2006; Terre Blanche et al., 2006). Participants were recruited based on specific criteria. They had to be at least 18 years old and registered educational psychologists involved in the treatment of autism spectrum disorder (ASD). Additionally, they needed a minimum of three years of experience working with ASD patients and/or in the field of ASD. Invitations and the participant information sheet were emailed to all potential participants, asking educational psychologists who met the criteria and were interested in participating in the study to contact me to set up a time for an interview. I also used snowball sampling, a convenience sampling method, by asking each participant and potential participant to forward or share the invitation with anyone else interested in participating who met the requirements (Shaheen et al., 2019). This method facilitated easier access to participants with the target characteristics, as educational psychologists typically work with others who share the required characteristics for the study (Naderifar et al., 2017).

To contact potential participants, I made use of publicly available contact details (sourced from public forums or online) to send invitations to participate in the study. I emailed educational psychologists directly when their details were available publicly, and I emailed ASD support groups and schools to enquire if they could recommend anyone or pass on the invitation to participate to anyone who might be suitable. Approximately thirty individuals were contacted directly however most did not agree to participate in the study. Snowball sampling also yielded only one response, underscoring the challenges in recruiting participants for the study.

The final sample consisted of eight participants aged 18 and above, all of whom were registered educational psychologists involved in the treatment of autism spectrum disorder (ASD). Each participant had a minimum of three years of experience working with ASD patients and/or in the field of ASD. Among the participants, one was male, and seven were female. Two participants were aged over fifty, with 19 years and 20 years of experience as registered educational psychologists. Four participants fell within the age range of forty to forty-five years old, while two were in their late thirties. These participants had a wide range of experience as registered educational psychologists with registrations between 4 years and 20 years. Six of the eight participants had English as their home language, while two were bilingual, proficient in both English and Afrikaans. In terms of professional settings, six participants worked in private practice, one exclusively in a school setting, three in both private practice and school settings, and one in a provincial education department outreach team.

Regarding their years of registration, six participants had been registered as educational psychologists for approximately 10-20 years, while two had less than 10 years of experience (between 4-7 years). Two participants had limited experience working with ASD clients, whereas four had extensive experience in this area. Two participants had experience working with roughly 10-15 ASD children. One participant had a considerable caseload, having provided services to about 600-700 ASD clients. Another participant worked with approximately 280 ASD clients in both their private practice and school settings, while one had experience with over 100 clients. For a full breakdown of the characteristics of each participant, please see **Table A.**

Many participants were not located in Johannesburg, but rather in dispersed locations across South Africa. The interviews took place using the Zoom online platform. The data was collected over a five-month period, from September 2022 to January 2023. Saturation is the point at which further data collection is not needed in a qualitative study (Saunders et al., 2018). Saturation was not achieved in this study, however the eight participants represented the maximum number of participants that could be realistically obtained due to the limited pool of individuals meeting the sampling criteria and the busy schedules of potential participants.

Response rates were very low, making it impossible to reach saturation within the given timeframe. Despite this, the sample was considered sufficiently robust to address the research questions.

Table A

Participant characteristics (n = 8)

Part.	Age	Gender	Length of HPCSA registration	Professional environment	Duration of involvement with ASD clients	Number of ASD clients worked with:
A	38	Female	10 years	Provincial department outreach team	14 years	Hundreds
B	45	Female	14 years	Private practice	14 years	10
C	36	Male	7 years	Private practice; specialized school	13 years	250-280
D	45	Female	20 years	Private practice	20 years	600-700
E	69	Female	20 years	Private practice; school setting	5 years	Unknown
F	41	Female	4 years	Private practice	15 years	15
G	45	Female	10 years	Private practice; primary and high school setting	At least 3 years	Unknown
H	54	Female	19 years	Specialized school; private practice; school setting	10-14 years	Unknown

Data collection

I first obtained ethical clearance to conduct the study from the Human Research Ethics Committee (non-medical) at the University of the Witwatersrand (protocol number: MEDPSYC/22/03). I then identified contact details for suitable possible participants and ASD schools and support groups and sent out invitations to participate in my research (please see Appendix B) with attached participant information sheets (please see Appendix C). Once potential participants contacted me, I negotiated with them to set up interviews at convenient times and places. I explained to the participants that the time frame of the interviews would be approximately one hour, and that the interviews could either be conducted in person or virtually, depending on national circumstances and the preference of the participants (both options were possible).

I explained to all participants that if they opted for an in-person interview, the interview would have taken place at an agreed safe location, either at their place of work or, if they were willing to travel, at the University of Witwatersrand. Additionally, I explained to each participant that social distancing between the participant and the researcher, as well as the wearing of masks, would have been implemented. However, all participants preferred and opted for online interviews due to their demanding work schedules and their dispersed locations across South Africa. The sessions took place using the Zoom online platform, and with the participants' consent, the interviews were recorded.

I asked participants if we could turn on cameras for the introduction part of the interview; however, I gave them the option to switch off their cameras as the interview progressed, as some individuals may have felt more comfortable with their cameras off. All participants chose to leave their camera on and expressed being comfortable with this. The recording was in video format. All participants had access to the Internet, a suitable device, and data. No technical issues were experienced during the interview process. The interviews were conducted individually with each participant, and with their consent, I recorded the interviews using a voice recorder.

All interviews were semi-structured, creating an atmosphere of openness and trust for participants to freely express themselves (Qu & Dumay, 2011). Each interview was conducted in English. Before commencing the interviews, I provided participants with another copy of the participant information sheet (please see Appendix C), explaining the aim of the interview and assuring them that participation would be confidential, with their identities kept anonymous when reporting the results. Participants were informed that if they felt uncomfortable at any point during the interview, they had the right to express their feelings and the option to withdraw. All participants chose to participate and were then asked to sign a consent form that included permission to record the interview and to use direct quotes from the interviews (please see Appendix D).

To initiate the interview, participants were asked to complete a brief demographic form (please see Appendix E). The interview was then commenced using prompts and questions from the semi-structured interview schedule (please see Appendix F). As both the researcher and interviewer, I took care to address the research questions thoroughly during the interview process to minimize the need for subsequent clarification or confirmation (Adams, 2015; Luo & Wildemuth, 2017). By presenting several open-ended questions, I directed the conversation towards the topic while allowing participants to contribute any additional pertinent details. Utilizing an interview guide facilitated the exploration and probing of relevant questions, affording me the flexibility to adjust inquiries as necessary. I centred the semi-structured interview questions surrounding the experiences of the participants when treating children with ASD.

Throughout the interview, I recorded and took notes while also striving to be as friendly and open as possible to encourage rapport and information sharing (DeJonckheere & Vaughn, 2019). Upon concluding the interview, the recording was stopped, and the participant was thanked.

As the researcher, I served as the primary instrument in the study, subjectively interpreting and analysing the data to address the research questions (Flick, 2009). I emphasized the significance of being reflexive and vigilant concerning the potential impact of my personal perspectives on the interpretation of the data. As an educational psychology student with volunteer experience, which involved serving as a facilitator and tutor at an Autism Intervention Centre, my commitment to honing skills and comprehending the effective role of educational psychologists in both independent and multidisciplinary settings was a driving force. Acknowledging the potential impact of my passion on data interpretation, I remained conscious of this influence throughout the research process, striving for accurate representation of participants’ perspectives (Palaganas et al., 2017). My prior involvement in ASD-related initiatives and exposure to various treatment modalities in South Africa during my volunteer work facilitated the establishment of rapport with participants and enhanced engagement. This, in turn, enriched the depth of the research, fostering a conducive environment for participants to expand on their insights comfortably.

The data was collected through individual semi-structured interviews with the participants. This approach proved highly beneficial as it allowed direct engagement with the participants, fostering openness and trust for them to freely express themselves. Additionally, it provided a versatile means of collecting data compatible with various data analysis methods (Willig, 2008). Magaldi and Berler (2020) characterize the semi-structured interview as an exploratory method, emphasizing its reliance on a guiding framework while remaining flexible to delve into discoveries during the conversation. Despite the predefined focus, this approach permits researchers to probe deeper into emerging themes based on participants' responses (Ruslin et al., 2022). In the context of this study, the semi-structured interviews followed a thematic framework, maintaining a balance between overarching questions, follow-up inquiries, and probing for further insights. Preparation of an interview schedule in advance proved advantageous as it ensured alignment with the research objectives and facilitated comprehensive coverage of the intended questions during the interview proceedings (Ruslin et al., 2022).

The interview schedule (please see Appendix F) was developed based on theory and available literature (for example, Aderinto et al., 2023; Guler et al., 2017; Robinson et al., 2017; Salgado-Cacho et al., 2022; Wetherston et al., 2017), with questions formulated to gather data for addressing the research questions. The questions prepared were open-ended, and prompts were included to enable me, as the interviewer, to seek clarification or additional information as needed. The questions were structured to provide participants with the space to bring up any topics that might arise during the interview (DeJonckheere & Vaughn, 2019).

The interview schedule began with my introducing myself and expressing gratitude to the participant for meeting with me, thus setting them at ease. I explained the purpose of the interview, the approximate duration, aspects of confidentiality, and voluntary participation. I discussed the participant information sheet and asked the participant to sign the consent form. The participant was informed that there was no need to disclose information about any specific patient, and if a specific case was discussed, it would be completely anonymized. The interview then commenced with introductory questions, which were broad inquiries like “Can you tell me a little bit about your experience of treating ASD children?” These questions aimed to allow the participant to feel comfortable discussing their experiences working with ASD children in South Africa.

Following the broader questions, I asked specific questions that could provide direct information relevant to answering the research questions. These questions delved into the types of treatment used and why, the roles perceived by the participants in the treatment process, their perspectives on their role as educational psychologists in the treatment process, views on the availability of ASD treatment in South Africa, challenges faced by ASD children and their parents when seeking or receiving treatment, challenges faced by educational psychologists in offering ASD treatment, and opinions on what should be included in a curriculum to train educational psychologists about ASD and ASD treatment.

Having a diverse range of participants across various demographics, including age, years of experience as educational psychologists working with ASD, locations of practice within South Africa, and different work settings (such as private practice, schools, and government institutions), proved beneficial. This diversity allowed for a comprehensive understanding of the common challenges faced by educational psychologists working with ASD children in South Africa, as well as the unique obstacles encountered in specific contexts and the corresponding strategies employed to address them. Of particular interest was the perspective of one participant who had experience working internationally before transitioning to South Africa, providing insights into the disparities in knowledge and practices between different contexts within the field of ASD. Several participants expressed a desire to connect with other educational psychologists specializing in ASD, emphasizing the importance of collaboration over isolation.

This underscored the relatively small and interconnected community of educational psychologists focusing on ASD and the need for mutual support.

Probing questions or requests for more information were incorporated into each interview as appropriate. At the end of each interview, a concluding question was posed about whether there was anything the participants would like to add or discuss on the topic. In total, the semi-structured interview schedule consisted of 25 questions, aiming to address all the research questions in this study.

The anticipated duration of the interview was approximately one hour. However, in this research study, interview durations varied, with most surpassing the one-hour limit, extending between 60 and 90 minutes. Participants demonstrated a willingness to devote additional time to the study, sharing extensive experiences and perspectives on the interventions or treatments of autism spectrum disorder (ASD) children in South Africa. Notably, one participant requested a second session to share additional information, a gesture that was greatly appreciated. While some participants exhibited passion and enthusiasm for the topic, others admitted to being less informed but were nonetheless eager to contribute to the discussion by answering questions within their knowledge scope.

Following the completion of the interviews, electronic copies of the recorded interviews were retrieved and reviewed using the pause and playback functions of the recording application. Each interview was manually transcribed, ensuring a word-for-word representation and to ensure accuracy, with no segments omitted. Subsequently, the transcribed interviews underwent a thorough review process to prepare them for analysis. Any information that could potentially identify participants was carefully removed and replaced with pseudonyms to ensure anonymity. This process, known as data sanitization, ensured anonymity in reporting the findings

(Dougherty, 2021; Kaiser, 2009). All transcripts and voice recordings were securely stored on a password-protected computer in password-protected files. Participants provided consent for the anonymized transcripts to be stored indefinitely and potentially utilized for future research (Kaiser, 2009).

For the analysis of the transcribed data, reflexive thematic analysis was employed as a method to identify, analyse, and report themes within the data. To assist in the transcription and analysis process, a self-reflexive journal was maintained with entries made throughout the research journey (Ortlipp, 2008). This journal functioned as a tool for self-awareness, allowing me to remain aware of how my own perspectives influenced the study and the interpretation of the data throughout the research process (Ortlipp, 2008).

Ethical considerations

To obtain permission to conduct the study, ethical clearance was obtained from the University of Witwatersrand Human Research Ethics Committee (non-medical) – the assigned protocol number was MEDPSYC/22/03. Any contact details used in the study to invite potential participants were either publicly available or were provided with permission to use them. The study was classified as minimal risk, and I explained to the participants what the research was going to be about, how it was going to be conducted, their right to withdraw at any point in the research without any consequences, and that their confidentiality was guaranteed. I also ensured that the participants remained anonymous when reporting the findings of the study.

For informed consent, participants were provided with a detailed participant information sheet (please refer to Appendix C). In the participant information sheet, I introduced myself, outlined the research aims, specified the requirements for participation, emphasized the voluntary nature of participation, and assured participants of their right to withdraw at any time with no negative consequences. It was mentioned that there were no direct benefits or foreseeable risks, and a consent form needed to be signed (please see Appendix D). Confidentiality and anonymity when reporting the findings were discussed, clarifying that no specific patient information was required, only generalized understandings and perceptions. The discussion also covered access to the data and storing it in an anonymous form for potential future research if permission for this was given. Additionally, feedback, queries, and contact details for my supervisor and myself were provided.

I ensured that participants knew that there were no direct benefits or foreseeable risks for participation and that the topic was not ethically sensitive. It was made explicitly clear to participants that they were not expected to disclose any confidential information about their clients or discuss any specific cases. Instead, they were asked to provide general information. Participants were given the choice to be interviewed in person or online in case they had any concerns about Covid-19, and social distancing and masks (and any other necessary precautions) were used if the interview was held in person.

The participants were known to me as the researcher, but I kept their identity strictly confidential, and I did not disclose their identity to anyone else. The data was only available to myself and my supervisor. Any information that could directly identify the participant as an individual was removed from the transcript of the interview and replaced with a code number or pseudonym instead of their name. Additionally, any information mentioned in the interview by the participant regarding a specific patient was completely anonymized. It was also made clear that the research only required generalized information. The data was sanitized to ensure that the findings were reported anonymously. All transcripts and voice recordings were stored safely on a password-protected computer.

For data storage, the data obtained during this research was digitally stored, and the transcribed interviews were stored in password-protected computer files. Only my supervisor and I had access, and the original recordings are to be destroyed when the study has been completed. Participants were asked for permission to store the anonymized transcripts indefinitely and to potentially use them for further research projects. Permission was granted by the participants, as they had a choice in this.

Participants in this research were not exposed to any physical or emotional harm. All forms of psychological discomfort or stress were avoided, and I emphasized to participants that if they felt uncomfortable at any point in the interview, they had the right to withdraw from the research. Participants had the option to contact me for a summary of the findings if they desired, and if they had any questions, they could contact me for further information (Arifin, 2018; Pietilä et al., 2020).

The study also adhered to the general principles of beneficence, non-maleficence, justice, autonomy, and respect for the dignity of persons by addressing all of the ethical considerations mentioned above (Terre Blanche et al., 2006).

Data analysis

To transcribe the interviews, I utilized the pause and playback function on the recording application to ensure that no parts of the interviews were overlooked and to verify all information. I documented what the participants said in the transcripts and made notes of facial expressions and non-verbal communication. After transcribing the interviews completely, I listened to the complete interviews again while simultaneously referring back to the transcribed interviews to ensure that no information was left out or incorrectly written. Once I had transcribed the interviews, I reviewed the transcripts for analysis. I kept a self-reflexive journal throughout this process.

For the analysis of the transcribed data, reflexive thematic analysis was employed. Thematic analysis was chosen as a means to analyze, recognize, and report themes in the data, as it described data in detail, reported the experiences, meanings, and reality of participants, provided flexibility through theoretical freedom, and could provide a form of analysis which was more reachable (Braun & Clarke, 2006). Thematic analysis gave me the ability to put together themes that captured important information in relation to the research question. Quality reflexive thematic analysis is "…about the researchers' reflective and thoughtful engagement with their data and their reflexive and thoughtful engagement with the analytic process" (Braun & Clarke, 2019, p. 594).

A theme represents a pattern in the responses in the data that relate to the research question in a meaningful way (Braun & Clarke, 2006). Braun and Clarke (2020) highlight that thematic analysis consists of six phases that are sequential but that should not be followed in order. Rather, the researcher should enact the steps flexibly, repeating these as needed in an iterative and recursive way until the analysis is complete (Braun & Clarke 2020).

The following steps described by Braun and Clarke (2013; 2020) were utilized through the process of analysing the data. The first phase was familiarization with the data and making notes to this effect. Familiarization entailed reading the transcripts repeatedly in order for me to become highly familiar with the data. This was necessary to identify information that might be relevant to the research question(s). The data was familiarized by transcribing the information verbatim after interviewing each participant. As the researcher, I looked for meanings and patterns in the data during this process. After transcribing the data, it was read and then re-read, making a note of initial ideas and familiarizing with the content of the transcripts (Byrne, 2022; Dawadi, 2020). This phase was quite time-consuming and required patience (Byrne, 2022). The step nevertheless helped me to document my thoughts and feelings regarding both the data and the analytical process.

The second phase was to generate initial codes (Byrne, 2022; Dawadi, 2020; Nowell et al., 2017). After reading and familiarizing with the data, an initial list of ideas regarding what was in the data and what was intriguing and relevant to answer the research questions was generated. Initial codes were then produced from the data (Byrne, 2022). The third phase was to search for themes (Nowell et al., 2017). Once all data had been initially coded as well as collated, an inductive and semantic approach was used in order to recognize the themes within the data set (Nowell et al., 2017). The themes were distinctive and there were times when they were contradictory to other themes. However, I made sure that these were related to each other and produced a clear picture of the participants' perspectives. This phase allowed me to let go of prospective themes that did not fit in with the overall analysis. By the end of this stage, I produced a summary that related themes and codes.

The fourth phase was to develop and review the themes before refining and defining them (Byrne, 2022; Nowell et al., 2017). A series of key questions (such as coherence, boundaries, quality of theme) were used that were proposed by Braun and Clarke (2019) to be addressed when potential themes were reviewed (Byrne, 2022). Themes were named and categorized in accordance with the research question they addressed. During this phase, codes and themes were revised and at times, removed to create the most suitable interpretation of the data. It was observed that changing the codes helped with re-interpreting the data and creating a final set of themes to represent the data.

The identified themes were refined and certain themes were dropped, while some were combined during a first level of review. During the second level of review, the validity of individual themes in connection to the data was checked. The themes were then defined and named during the fifth phase, shifting data and combining themes again as needed (Byrne, 2022; Nowell et al., 2017). Once a set of fully worked-out themes was obtained, a final report (the sixth phase) was written that included the final analysis as well as the write-up of the findings (Byrne, 2022).

Trustworthiness and credibility

Trustworthiness, or the rigour of a study, represents the degree to which researchers can be confident in their interpretation of the data (Connelly, 2016). As the researcher, my goal was to bolster the credibility and trustworthiness of my findings by ensuring that the data accurately captured the depth and intricacy of the participants' perspectives on treating ASD in children within the South African context and that I was reflexive in my approach (Ahmed, 2024; Naeem et al., 2023).

The concept of credibility in research refers to the truthfulness and believability of the findings. As described by Terre Blanche et al. (2006), credible research produces results that are convincing and trustworthy (Connelly, 2016; Creswell & Poth, 2018). Various methods were employed in my study to ensure credibility, including prolonged interaction with participants, ongoing observation when appropriate, debriefing with my supervisor, and maintaining a reflexive journal (Connelly, 2016). I also actively participated in every stage of the process by personally conducting all the interviews and transcription. During the interview process, I ensured adequate time was dedicated to acquainting myself with the setting and context, verifying information, establishing trust, and gaining a thorough understanding of the data, thereby facilitating the acquisition of rich and meaningful insights (Korstjens & Moser, 2017). Participants in the interviews substantiated their statements with examples from their own experiences, enhancing the credibility of their accounts. Furthermore, credibility was reinforced through the application of a recognized research methodology. Prior to commencing data collection, careful consideration was given to crafting interview questions designed to elicit information aligned with theoretical frameworks. (Korstjens & Moser, 2017). The data analysis process followed a systematic approach, with regular supervision and guidance provided at key junctures to ensure methodological rigour and accuracy (Stahl & King, 2020).

Transferability

Transferability pertains to the capacity for application of the research findings (Elo et al., 2014). Transferability allows other researchers to draw insights from the process and to adapt these to their specific context, particularly in naturalistic research (Connelly, 2016). Bearing this in mind, I ensured the use of "thick description". This entailed recording a wide array of information, including behaviours, contexts, and experiences, to make the research meaningful to individuals outside of the study (Korstjens & Moser, 2017).

Dependability and confirmability

The concept of dependability concerns the consistency and reliability of data both over time and across varying conditions encountered during the study (Connelly, 2016; Nowell et al., 2017). Confirmability concerns the impartiality and objectivity of the findings, ensuring they are not influenced by any biases or preferences of the researchers (Ahmed, 2024). To ensure this, I have maintained an audit trail comprising notes from supervisor meetings, complete transcripts of participant interviews, process notes, and initial coding derived from the reflexive thematic analysis. Additionally, maintaining a reflexive journal allowed me to document my thoughts, biases, and reflections, fostering transparency and maintaining an awareness of my subjectivity (Ahmed, 2024).

Reflexivity and qualitative rigour

Reflexivity involves consistently engaging in critical self-reflection regarding both individual and group thoughts and actions (Nowell et al., 2017). Qualitative interviewing included a procedure of continuous reflection, and reflexivity involved the process of assessing myself as the researcher in the study as well as the research relationship (Flick, 2009). As the researcher, I was the primary instrument in the research, and it was therefore imperative for me to be reflexive and to be aware of how my own perceptions might shape my interpretation of the data. At the time of conducing the research, I was an educational psychology student with volunteer experience that included working as a facilitator and tutor at an Autism Intervention Centre. As a result of this work, I was and am passionate about developing my skills and gaining the best understanding possible of how educational psychologists can work independently and as part of a multidisciplinary team to optimize ASD children's lives and experiences. I recognized that this passion might shape my interpretation of the data, and I strove to be aware of this throughout the research process and to ensure that I accurately represented participants' perspectives (Palaganas et al., 2017). To help with this, I kept a self-reflexive journal whereby my journal entries were made throughout the process of the research (Ortlipp, 2008). This helped me to remain aware of how my own perspectives shaped the study and interpretation of the data throughout the research process (Ortlipp, 2008). I also kept a careful record of all the steps that were taken in the research (an audit trail), and I collected relevant referential material such as media reports, policies, and guidelines for the treatment of ASD. I validated my findings through the use of direct quotations from the participants and I obtained background information about the participants to help understand how this informed their perspective (Fossey et al., 2002).

Chapter 4: Results and discussion of the data

In this chapter, the themes representing the perspectives and experiences of educational psychologists regarding treating children with ASD in the South African context were categorized to address the study's primary research question and sub-questions. The findings and discussion of these findings in relation to the literature have been structured to align with the research questions, including the forms of treatment chosen and their perceived efficacy, factors influencing decisions about treatment, level of involvement and role relative to others involved in the treatment process, challenges faced and possible ways to mitigate these, and common strategies for treating ASD children in South Africa. Each theme is discussed following its presentation and quotations from participants are used to support the interpretation of each theme.

Theme 1: The level of experience of educational psychologists in the sample in treating children with ASD

The level of experience of educational psychologists in the sample with respect to treating ASD children within the South African context revealed two subthemes – limited experience in treating children with ASD and extensive experience in treating children with ASD.

Subtheme 1: Limited experience in treating children with ASD

Three participants indicated a lack of experience in working with individuals with ASD. One participant mentioned having conducted assessments for children with ASD but acknowledged that her knowledge of specific treatments was limited, characterizing her exposure to ASD as accidental. Participant B (registered for 14 years; 14 years of experience with a few

ASD cases) recalled encountering a few cases and explained that she focused on offering guidance to parents and providing emotional support:

> *I’ve had a few cases but it was more regarding just to give guidance to parents and to help them emotionally.*

Participant G (registered for 10 years; at least 3 years of experience with ASD cases) admitted that she had limited experience in treating children with ASD, mentioning only assessing one girl suspected to be on the spectrum in her years of practice. Furthermore, she added that she had not worked with any diagnosed ASD individuals specifically referred to her:

> *So, as I mentioned, I don't have a lot of experience in treating children with ASD. I think in the eight years that I've been practising, I’ve assessed one little girl who I suspect definitely was on the spectrum. Uhm, and then otherwise I haven't really worked with, or nobody has been referred to me that specifically has been diagnosed with ASD at all. However, you know, as clients come along the way, every now and then I can see some symptoms that I would say, Ooh, I suspect this child is on the spectrum.*

Subtheme 2: Extensive experience in treating children with ASD

Five participants reported having extensive experience of working with ASD children, with three of them gaining experience before becoming educational psychologists. Participant F (registered for 4 years; 15 years of experience with a few ASD cases) focused primarily on assessment, observation and diagnosis during her four years as a qualified educational psychologist. The journey of participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) began in 2003 as a special needs teacher overseas, where she worked before transitioning to a similar role in South Africa within a school setting. She worked first as a teacher and then as an educational psychologist at the same school. She had worked with ASD individuals, families and communities. Currently, she works solely in private practice:

> *I do assessments, I do parent guidance, I go to schools, and I give them guidance. I sometimes help them with assessments at the schools. I do presentations at the schools, I do therapy, I will write letters for adults who after Covid needs to stay at home and work because they cannot cope with the social aspect. So, I try and do everything, I do sexuality training with people on the spectrum so anything to do with ASD.*

Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) initially worked as a psychometrist at a special needs school before becoming an educational psychologist, offering services in both school and private practice settings. Additionally, Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) specialized in working with higher support ASD cases, providing assessments, school placements, teacher training, and involving all team members, including parents, in the treatment process:

> *I've been on this team for quite a while. Most of our clients are the high support children so I feel like I am more experienced in the children who require quite a high level of support than the lower support children. It is usually children who are in special schools. I do a lot of assessment to look at what their level of support might be and to see if they require to be in a special school or not and then there is also training of teachers and individuals who work with or will be working with children with Autism in the future as well as working with parents. It is often working with parents along with their children.*

This is in line with another participant's approach of comprehensively involving the entire team in supporting ASD children.

The challenge of finding registered educational psychologists with experience in treating ASD in the South African context for this research study underscores the scarcity of professionals in South Africa engaged in ASD cases (Aderinto et al., 2023; Dückert et al., 2023; Hahler & Elsabbagh, 2014; Mathews et al., 2022; Zeleke et al., 2021). Many participants with extensive ASD experience acquired it through prior training before becoming educational psychologists or by working in government or ASD school settings where ASD cases were common. While educational psychologists receive training across various child development and educational domains, their exposure to specialized ASD training may have been limited. This lack of specialized expertise may have left them feeling less than fully equipped to address the complex needs of individuals with ASD. Additionally, several systemic and societal factors in South Africa may have contributed to their limited involvement in these cases (Guler et al., 2017; Wetherston et al., 2017). This mirrors findings in the literature that emphasize the scarcity not only of educational psychologists but also of all mental health professionals with specialized ASD training for delivering treatments and interventions (Dückert et al., 2023; Hahler & Elsabbagh, 2014; Mathews et al., 2022). Moreover, the literature underscores a gap in psychology curricula, which should include attention to early signs of possible ASD, screening and diagnostic tools, and possible treatment interventions (Mathews et al., 2022). One of the participants (Participant C) raised this directly:

> *…there is a lack of professionals in the field of ASD or in the specializing field of ASD and the professionals that specialize in it is not really culturally varied professionals.*

In a South African study conducted in the eThekwini Metropolitan Municipality that explored parental perspectives and awareness regarding treatments for children with ASD, parents also expressed frustration over the contrast between the abundance of information on the internet and the limited availability of treatments in South Africa (Wetherston et al., 2017).

Theme 2: Forms of treatment used by educational psychologists when working with ASD children in South Africa

There were three sub-themes for the forms of treatment participants used when working with ASD children in South Africa: social skills training and play therapy, evidence-based interventions, and psychoeducation and collaboration.

Subtheme 1: Social skills training and play therapy

Seven of the participants underlined the necessary integration of interventions targeting the enhancement of social and communication skills, recognizing these as key areas of challenge for many ASD children. Two participants specifically singled out the use of social scripting as a targeted intervention in their work with ASD children. Additionally, three participants highlighted the incorporation of play therapy into their comprehensive treatment approaches for ASD children. This aligns closely with recommendations in the literature, as these treatments directly address the challenges faced by children with ASD with communication and socialization (Autism Speaks, 2022c; Divya et al., 2023; Ganz et al., 2008; Luetkemeier, 2023; Meadan et al., 2011; Narzisi et al., 2021; Scheibel et al., 2021; Thayer, 2016; Vegni et al., 2023).

The literature emphasizes the use of visual supports, social stories and social skills training that all target the enhancement of social and communication skills (Robinson et al., 2017). Social scripts have been identified in the literature as a valuable intervention as they help children to understand social situations, prepare for conversations, and manage difficult social situations, thereby enhancing their social and communication skills and promoting their independence (Ganz et al., 2008; Luetkemeier, 2023; Meadan et al., 2011; Scheibel et al., 2021). Additionally, play-based interventions such as DIR/Floortime and LEGO® therapy are highlighted in the literature as beneficial interventions that promote social and communication skills (Autism Speaks, 2022a; Divya et al., 2023; Narzisi et al., 2021; Thayer, 2016; Vegni et al., 2023). The use of these interventions is in line with the literature about evidence-based practices for intervention when treating ASD internationally (Robinson et al., 2017). In a study that explored evidence-based practices for autism spectrum disorder (ASD) among educational psychologists in the United Kingdom and Ireland, commonly employed evidence-based interventions included visual supports, social stories and social skills training (Robinson et al., 2017).

One participant detailed the use of group-based play therapy to address social interventions, while another participant focused on using play therapy to navigate social dynamics, simultaneously enhancing communication. Emotional regulation emerged as a crucial aspect, with three participants incorporating interventions such as breathing exercises, and emotion recognition and naming. Participant E (registered for 20 years; 5 years of experience with ASD cases) incorporated social scripts as a way to help her ASD clients cope with emotional difficulties, enabling them to regulate their emotions:

> *I work around things like social scripts and kind of just helping them cope with whatever is happening on an emotional level such as emotional regulation.*

These strategies aimed to increase the ASD child’s capacity to manage overwhelming situations and to mitigate meltdowns and shutdowns that could interfere with functioning. The literature endorses the value of these types of interventions (Ahlers et al., 2017; Elbeltagi et al., 2023).

Two participants shared information about their approach that involves incorporating sexual education programmes when working with ASD children as part of social skills training. One participant emphasized that he incorporated the sexual education programme particularly with ASD boys in the school setting and implemented the "I am special" programme established by Peter Vermeulen in Belgium to raise awareness of ASD. The "I am special" programme offers a comprehensive approach to helping individuals with ASD to understand their diagnosis and develop confidence **(**Vermeulen, 2013). Vermeulen (2013) outlines the theoretical framework and research underpinning the programme and provides practical guidance on its implementation, including visual aids and interactive learning materials for children with ASD and their families.

These two participants maintained that they acquired most of their knowledge about these therapeutic approaches through the school where they worked, as well as through other professionals who had mentored them. They also indicated that they had personally read a lot because of not having enough exposure to ASD during their academic training. Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) expressed the following:

> *So, I learned most of my knowledge or gained most of my knowledge in practice, actually at the school that I work at, previous mentors, therapists and professionals that have mentored me and then also a lot of reading as you have to do a lot of reading.*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) drew inspiration from Tony Attwood's work in Australia (Attwood et al., 2008). Specifically, she adopted the CAT program for Communication and Social Skills:

> *The first one is on Tony Attwood's work. He is from Australia. He has some lovely programmes, the CAT programme, very nice communication programme, social programme and that kind of stuff.*

Dr Tony Attwood, along with Dr Kirsten Callesen and Annette Moller Nielsen of Denmark, developed the CAT-kit, a practical tool designed to explore underlying thoughts and emotions that drive behaviour (Attwood et al., 2008). The kit offers ways for children with ASD to communicate with others, including using visual aids that can be customized for each child to help him or her to connect their feelings, thoughts, and actions (Attwood et al., 2008). Therapists and professionals have found the CAT-kit to be a user-friendly adaptation of cognitive-behavioural techniques, providing insights into students' inner thoughts and emotions while fostering self-awareness and self-regulation in a supportive environment (Attwood et al., 2008). Participant D also acknowledged relying on insights from the Autism Experts in Seattle, leveraging their training to assist individuals on the spectrum and professionals in enhancing emotional capacity.

The "I am special" programme, the CAT programme, and the Autism Experts in Seattle represent specific interventions that were not mentioned directly in the literature, although they make use of common intervention strategies such as visual aids and social scripts (Ahlers et al., 2017; Ganz et al., 2008; Luetkemeier, 2023; Meadan et al., 2011; Robinson et al., 2017; Scheibel et al., 2021). This supports the observation that international resources for ASD intervention are more extensive and readily available than those developed in South Africa (Aderinto et al., 2023;

Bakare & Münir, 2011; Guler et al., 2017). Participants indicated that they often found it necessary to seek resources internationally owing to the lack of resources available in South Africa, which endorses the idea of increasing access to effective intervention services in South Africa through establishing strong partnerships with nonprofit organizations and agencies nationally and internationally (Guler et al., 2017; Kantawala et al., 2023). Kantawala et al. (2023) propose that "Through strategic partnerships, African nations can leverage the expertise and resources provided by these international autism agencies to advance awareness and understanding of ASD" (p. 5840).

One participant revealed that she acquired knowledge about therapeutic approaches, including social scripts and play therapy, through a South African centre devoted to working with neurodiverse individuals. As part of this training, she was introduced to the Diagnostic Interview for Social and Communication Disorders (DISCO). The DISCO is a semi-structured interview conducted with the parent or caregiver of an ASD individual that aims to create a thorough understanding of the behaviours and needs of the ASD individual (Leekam, 2013; Uljarević et al., 2022). It allows the clinician to assess the individual's developmental level, disabilities and specific needs by assessing a wide range of emotional, sensory and psychiatric symptoms and skills (Leekam, 2013). This exposure to DISCO was unique within the sample and rare within the literature.

Subtheme 2: Evidence-based interventions when treating ASD children

All the participants highlighted the crucial role of evidence-based interventions in addressing ASD. Six participants collectively stressed the importance of research-grounded approaches, mentioning methodologies such as social stories, augmentative and alternative communication (AAC), and picture exchange communication systems (PECS). At the same time, they acknowledged the necessity for specific training.

Both Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) and Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) explicitly cautioned against unreliable or unverified approaches. Participant C stressed the critical importance of evidence-based practice, particularly in the context of ASD, emphasizing its imperative nature:

> *So, this is where it is very important to go based on evidence as evidence-based practice is essential when it comes to autism....*

Participant C recognized the need to broaden perspectives beyond relying solely on evidence-based interventions, despite acknowledging their significant value. In the context of South Africa's limitations when it came to accessing certain interventions or treatments, he recommended prioritizing context-based strategies instead:

> *I think all evidence-based interventions can be valuable in South Africa but we just don't always have the access and availability so that makes it a very difficult questions to answer because ideally, you would actually be implementing that but I think a big one to implement like I said in the previous question is the context based strategies. So, then, what else would I not recommend? Uhm, so ABA I wouldn't, because of its rigidity.*

Similarly, Participant D expressed a commitment to research-based treatments and voiced some scepticism toward unverified approaches:

> *I do research-based treatments and I don't use fly-by-nights because you are wasting the client's time and money....*

This corresponds with the literature, which indicates that practitioners often base their treatment choices on the best available evidence (Robinson et al., 2017; Spring et al., 2008). Previous research has demonstrated that evidence-based interventions (EBIs) are indeed effective for ASD (Robinson et al., 2017; Wetherston et al., 2017).

Subtheme 2.1: Visual supports and interventions

Participants emphasized the importance of incorporating sustainable and non-dependent interventions for children with ASD, with a focus on visual supports. Five participants highlighted the use of visual interventions, such as social stories, acknowledging their efficacy in South Africa. Two participants noted teachers' frequent use of visual supports in classrooms. Functional communication interventions were seen as beneficial, though not explicitly mentioned by one participant. The need for interventions that did not draw excessive attention to the child was also emphasized. Participants A, D, and H collectively stressed the significance of practical, structured, and unobtrusive interventions for ASD children.

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) touched upon a crucial aspect that many participants mentioned: the sustainability of interventions. She emphasized that interventions should be something that can be carried forward and applied in various settings. Specifically, she highlighted the importance of providing portable strategies, such as visuals, that can be used wherever the child goes:

> *I feel like when you are putting support for a child, it is like giving someone a pair of glasses and when the child is doing better, you can't take the glasses away because they still can't see so it must be something that you can take with you and you can go forward with it so when you are getting strategies using visuals then it is useful to have things that they can use everywhere they go.*

Building on this, Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) recommended integrating visually-based language communication, such as schedules, into her interventions to help clients manage their daily needs:

> *I must say autism-specific things like visually based language, communication… things like schedules and preparation for them when there is going to be difficulties. So, all those basic things that we know are important such as they need preparation, they need visuals, they need routine and structure and creditability. So, I try and bring those things in but these are sort of the basics for what does a person with ASD need to feel comfortable and be able to cope with their daily requirements that they have got in their lives.*

Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) echoed this sentiment, highlighting the value of social scripting and structuring the day to create a seamless flow for ASD children, ensuring their needs are met without drawing undue attention:

> *...the social scripting, whatever you call it where you go through an event with a child and say this is what might happen, this is how you are going to feel....*

Participant D recommended making use of the picture exchange communication system (PECS), augmentative and alternative communication (AAC), and the TEACCH programme. She emphasized the value of the TEACCH programme within school settings, noting its effectiveness in facilitating learning through a visual and structured teaching approach. She described TEACCH as an old American-based programme focused on educating children with communication needs. She further highlighted its helpfulness in her training efforts and support provided to schools:

> *I do a lot of training at the schools and stuff and helping at the schools, the TEACH programme for schools is very, very helpful.*

These approaches aim to create a supportive environment for ASD children, promoting communication, understanding and effective learning. This corresponds entirely with the literature, which highlights the efficacy of various forms of visual support for young children with ASD (Boggs, 2016; Cohen & Demchak, 2018; Meadan et al., 2011; Rutherford et al., 2019; Simmons et al., 2020). The literature notes that structuring the environment with visuals has been shown to enhance the independent functioning of children with ASD in their natural surroundings, reducing the need for adult prompts during routine tasks (Boggs, 2016; Cohen & Demchak, 2018; Meadan et al., 2011; Simmons et al., 2020). This emphasis on sustainability and non-dependency is of a piece with the importance that participants placed on such interventions. Moreover, the literature indicates that visual cues and scripts can enhance communicative speech and are perceived as less intrusive and socially stigmatizing than verbal prompts or reminders (Ganz et al., 2008; Rutherford et al., 2019). The participants in this study also testified to the benefits of visual supports in this regard, noting that their subtle nature avoids drawing excessive attention to the child. Additionally, the literature discusses how visual supports can be effectively utilized across various environments, including the home, which resonates with Participant A's reference to their versatility (Rutherford et al., 2023; Simmons et al., 2020). Furthermore, it highlights their suitability for shared classrooms, where they are likely to prove less disruptive to other students than verbal prompts (Ganz et al., 2008). Teachers are noted to benefit from the ease of application and minimal resource requirements associated with visual strategies, a point made by two participants regarding teachers' frequent use of visual supports in the classroom (Robinson et al., 2017; Ganz et al., 2008).

Subtheme 2.2: AAC (augmentative and alternative communication)

Three participants drew attention to the effectiveness of augmentative and alternative communication (AAC) as a beneficial intervention for children with ASD. The use of AAC was recommended as a treatment strategy in South Africa, depending on the child's level of communication capacity.

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) and Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) both highlighted the significance of a speech therapist's involvement in exploring AAC for children with ASD. Participant A recognized the crucial role of the speech therapist in the treatment process, particularly in assessing communication abilities and implementing alternative and augmentative communication systems when necessary:

> *…and the speech therapist would look at the communication and alternative and augmentative communication systems and whatever ways for the child's communication needs.*

Participant C underscored the importance of evidence-based approaches, particularly in speech and language interventions, and highlighted the effectiveness of AAC strategies, specifically mentioning the picture exchange communication system (PECS):

> *What has proven to work is your evidence-based approach when it comes to speech and language interventions, to look at the augmentative and alternative communication strategies and practices like your Picture Exchange communication systems (PECS).*

Furthermore, Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) emphasized the individualized nature of augmentative communication, particularly for nonverbal children:

> *I think the augmentative communication depends on their level, if they are nonverbal then the speech therapist is helping with that.*

All this is in line with the literature, which characterizes AAC as an evolving treatment (Wetherston et al., 2017). AAC is also recognized, in the literature and among the participants, as an effective communication method for individuals with ASD, enabling them to articulate thoughts, express needs and convey emotions (Moller, 2023). However, it is noteworthy that the literature ignores the role of speech therapists in AAC intervention, a factor frequently noted by the participants who spoke about this treatment.

Subtheme 2.3: Picture exchange communication system (PECS)

Three participants acknowledged the effectiveness of picture exchange communication systems (PECS) among various interventions for ASD. While one participant highlighted the challenges of implementing PECS because of a lack of specific training, another referred children to speech therapists specializing in PECS.

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) emphasized the need for user-friendly methods due to a lack of specific PECS training:

> *Our teams have been working with autism for many years but we have never been trained specifically in PECS so we cannot even use it....*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) said that she had found PECS to be extremely helpful:

> *I have found that PECS is incredibly helpful, so I don't do the PECS obviously, the speech therapists do the PECS. I have found that the PECS are really, really helpful for young people who we are still trying to get them to communicate.*

Participant F (registered for 4 years; 15 years of experience with a few ASD cases) highlighted the potential of PECS and other methods, provided allowance was made for individual variability:

> *These methods have the potential to prove beneficial, however, it will depend on each individual child and how receptive they are to these methods.*

The PECS has been shown to assist in increasing communication and speech outcomes (Thiemann-Bourque et al., 2016). The literature has also highlighted the necessity for PECS training, noting that the prerequisite skills for initiating such training are minimal (Murray, 2014). As indicated by Participant A, not having the opportunity to train for PECS is likely to limit one's ability to utilize it in South Africa, despite its being cost-effective and accessible (Murray, 2014). It may also be more useful for educational psychologists to be familiar with the treatment but allow it to be implemented by a trained speech therapist, as suggested by Participant D. This supports the importance of team-based intervention and providing holistic treatment for children with ASD (Dillenburger et al., 2014; Karst & Van Hecke, 2012; Robinson et al., 2017; Sadreddini, 2017; Sinai-Gavrilov et al., 2019; Vivanti & Hamilton, 2014; Wetherston et al., 2017). The overall sentiment was that PECS, though beneficial, depends on the individual child's receptiveness. This conforms with the reiterated contention in the literature that each and every child on the spectrum is different and may react differently to certain treatments. One has to take into account his or her preferences, characteristics, values, interests and many other factors that are important when selecting a treatment or intervention (Robinson et al., 2017; Spring et al., 2008).

Subtheme 2.4: LEGO®-based therapy

LEGO®-based therapy is a form of intervention that has gained recognition in the context of treating children with ASD. Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) highlighted the effectiveness of this approach and mentioned that there is substantial research supporting its use:

> *I do a lot of* LEGO®*-based therapy which had a lot of research done on it and had been found and the practices that we use in the* LEGO®*-based therapy show reliability and validity… when it comes to the* LEGO®*-based therapeutic approach that I use in my therapy, I do tend to work in essential therapeutic skills that they actually try and reinforce in the speech language based therapy, requesting, turn-taking, communicating needs effectively so all those kind of things we do tend to all work on together.*

Participant C was the only participant who mentioned incorporating LEGO®-based therapy as a treatment or intervention when treating a child with ASD, although other participants mentioned more general forms of play therapy. Participant C also emphasized collaboration during treatment, indicating that a collaborative effort is crucial for providing a comprehensive and integrated approach to therapy. Participant C also shed light on the specific social skills targeted during LEGO® therapy sessions, which included requesting, turn-taking and communicating needs. This is corroborated in the literature, where a LEGO®-based approach is employed to engage the child in playful and constructive activity and address major social and communication challenges associated with ASD (Narzisi et al., 2021; Vegni et al., 2023). In summary, Participant C's use of LEGO®-based therapy was grounded in research and focused on reinforcing essential social skills. The collaboration with other members of an interdisciplinary team when applying this treatment also demonstrated a concerted effort to address the diverse needs of children with ASD.

Some of the information provided by participant C corresponds with the literature in indicating that LEGO® therapy fosters collaborative efforts toward a shared objective and enhances communication, perspective-taking, social interaction and negotiation skills (Narzisi et al., 2021; Vegni et al., 2023). The skills developed through LEGO® therapy are also assumed to transfer to real-life situations, which seems to be supported by Participant C's perspective **(**Narzisi et al., 2021; Vegni et al., 2023). However, the literature also highlights a survey conducted among 146 educational psychologist practitioners in the UK and Ireland which showed that interventions like LEGO® therapy are rarely if ever employed by educational psychologists (Robinson et al., 2017). This was because this intervention typically requires significant individualized support from highly trained adults, thus posing challenges in school-based settings **(**Robinson et al., 2017). This may be the reason why Participant C (who worked at a special education school) was the only participant who used LEGO® therapy as an intervention or therapy when treating ASD children.

Subtheme 2.5: Applied behavioural analysis (ABA) and its perceived efficacy

Seven participants expressed concerns about applied behavioural analysis (ABA), noting that it can hinder flexibility in individuals with ASD. The reasons for this perception include the creation of dependency, a focus on rote learning without understanding, and a lack of contextual relevance. Some participants did, however, adapt cognitive-behavioural approaches to be more context-specific, moving away from the clinical setting to foster creativity and resourcefulness.

Both Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) and Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) raised concerns about different therapeutic approaches. Participant C emphasized the limitations of purely cognitive-behavioural therapy, stressing the importance of contextual adaptation and expressing doubts about its effectiveness in promoting independence:

> *What I have found less effective is that some kids struggle purely on your cognitive behavioural approaches. I need to adapt that quite a lot to make that context specific. I need to actually approach a lot of that in contextually so that is why I approach it in a social skills groups where they actually get exposed to certain situations where and we deal with those behaviours there and then and then we can go through the cognitive behavioural strategies but just purely cognitive behavioural therapy I feel does not tend to work as well.*

Furthermore, when asked specifically about applied behaviour analysis (ABA) and whether he considers it less effective due to its potential to increase dependency, he responded that while it is effective, it does not necessarily foster independence, a primary goal of his interventions:

> *It is effective but it leads to other problems so it is effective and there is evidence to show that it is effective but it does not make learners independent and that is what we want in the learners.*

Participant D shared similar reservations about applied behaviour analysis (ABA), noting that while it enables ASD clients to provide answers, these may lack true understanding and functional application in the skills taught. She illustrated her point with an example of an 8-year old individual with cognitive impairment who underwent intensive ABA but experienced limited meaningful outcomes:

> *I think ABA is helpful because you get them to sit down, you get them to look… My concern is that for other individuals, especially if they are cognitively significantly impaired, it becomes more about training so that they can give you that answer but there is no true understanding. So, the skill has not been mastered, the skill cannot be generalized, the skill is not functional, it is not going to add value to that child's life. I have seen a young man this week,* he *is 8 years old and he had 2 years of ABA, intensive ABA, at great cost to the parents. But he is cognitively significantly impaired and yes, he can match this and he can sort this and he can do that but it means nothing.*

Participant E (registered for 20 years; 5 years of experience with ASD cases) initially contemplated applied behaviour analysis (ABA) for her Master's degree but decided against it due to its punitive nature in its traditional form. She had, however, observed a shift in ABA towards a more naturalistic, reward-based, and strength-focused approach. This perspective is consonant with Participant C's statement that ABA can be useful if adapted to the specific context. Participant G (registered for 10 years; at least 3 years of experience with ASD cases) and Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases), both of whom had limited experience of working with ASD cases as educational psychologists but who had gained knowledge of certain treatments, criticized ABA for its lack of flexibility. Participant H acknowledged its effectiveness for certain levels of functioning but expressed discomfort with its Pavlovian nature:

> *I witnessed, I observed it and I wouldn't use it. To me it's very Pavlovian but it obviously is very effective for certain level of functioning because I think for the [severely affected]*

> *kids, it also worked so it's just getting them to do what you need them to do but I don't feel comfortable doing it.*

These perspectives underscore concerns about the rigid approach of ABA and its reliance on conditioning methods. Overall, the participants' perspectives suggest a critical evaluation of ABA that, mindful of its potential drawbacks, points to the need for more flexible and contextually relevant therapeutic approaches. The viewpoints expressed by the participants closely mirror the findings in the literature, which indicate concerns about ABA's exclusive focus on observable behaviour and its rigidity if applied using traditional approaches (Leaf et al., 2016; Lord, 2023; Shkedy et al., 2021; Wong, 2019). ABA's exclusive focus on observable behaviour, neglecting internal aspects such as thoughts, emotions, and pain, has been criticized for its potential to result in psychological and physical abuse, raising concerns about the ethical imperative to "do no harm" (Shkedy et al., 2021). This echoes the participants' concerns, particularly the opinion of Participant F (registered for 4 years; 15 years of experience with a few ASD cases):

> *Applied behavioural analysis (ABA) as it is, is in my personal experience, unethical and borders on being abusive.*

Studies have noted that ABA therapy often involves significant repetition, posing challenges for children, while the skills acquired thereby may not translate effectively to diverse situations (Lord, 2023). This is in line with participants' consensus on hindering flexibility, with Participant D specifically noting that the skills individuals learn through ABA cannot be generalized. Nevertheless, several participants indicated that adapting ABA could yield benefits, a sentiment echoed in the literature, which discusses interventions that employ ABA principles but with modifications to reduce rigidity (Leaf et al., 2016; Wong, 2019. One such intervention is discrete trial teaching (DTT), where a progressive approach allows therapists greater flexibility, enabling real-time adjustments based on factors like individual responses and past experiences (Leaf et al., 2016).

Subtheme 3: Psychoeducation, parental and family support, and tailoring interventions as part of ASD treatment

The importance of psychoeducation in the treatment process for children with autism spectrum disorder was highlighted by six participants. They emphasized the need to educate various stakeholders, including parents, teachers, and other professionals, to create a supportive and informed environment for children with ASD. Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) stated:

> *It is more psychoeducation and just finding ways to assist the children in the classrooms or at home but it is not a specific therapy.*

All the participants also stressed the significance of supporting parents and families through psychoeducation, collaborative approaches, and tailored interventions, recognizing the pivotal role parents play in the journey of treating a child with ASD. One participant tailored treatment plans according to available resources and the support of like-minded parents.

Participants A and C both highlighted the extensive impact of a diagnosis of ASD on the entire family and endorsed the importance of psychoeducation and support during the grieving process. Participant C drew attention to the value of context-based treatments and the significance of sibling-based support. Similarly, Participant F (registered for 4 years; 15 years of experience with a few ASD cases) underscored the importance of family support and psychoeducation, specifically emphasizing the crucial roles of parents and siblings in implementing routines and interventions at home:

> *…the most important members of the team are the parents and the siblings of the child as they are the ones who have to implement the routines and interventions in the home environment.*

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) endorsed a modern, asset-based, and holistic approach to ASD, placing emphasis on the importance of supporting parents to alleviate associated stress:

> *Ja, it is more of a modern approach and more asset based based therapy and more holistic approach but it works well…and also we have to support the parents because it brings a lot of stress and concern so sometimes even the parents come to see me just to regulate.*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) mentioned that she brings together certain parents of children with ASD to provide support for each other:

> *Sometimes what I do is if I find two parents who are like-minded in similar situations, what I then do is I try and then connect them together. Uhm, and then they can kind of support each other so it is quite helpful.*

This resonates closely with the literature, where the need for ASD parents to receive substantial support (which can be achieved by connecting with individuals who are going through similar experiences) is widely noted (Hecimovic & Gregory, 2005). Participant E (registered for 20 years; 5 years of experience with ASD cases) echoed this sentiment, stressing the significance of psychoeducation and support, while emphasizing the role of containment for parents as they navigate the challenges and find a way forward:

> *So, very often for me is that psychoeducation and containing the parent and helping them find a way forward, and once you are working with them on the way forward, then with that you can work from the next step so okay, what is affordable for you and what can we do.*

In their respective roles, both Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases), who works with a provincial outreach team, and Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases), who works in both a school setting and privately, recommend a comprehensive approach for supporting children with ASD. Participant A directs her efforts towards guiding those directly involved with children, offering inclusive strategies for all students:

> *I don't do any individual therapy with the children so it will be more guiding the people that are working with the children.*

Participant A's emphasis on psychoeducation and supporting others involved in working with children with ASD is in agreement with the literature (Department of Health, 2017; Donald et al., 2010; Elder et al., 2017; Farell, 2004; Ho et al., 2013; Kalyva, 2013; Robinson et al., 2017; Sadreddini, 2017; Wetherston et al., 2017). It also supports the value of interventions such as social communication emotional regulation and transactional support (SCERTS), which focuses on enhancing social communication, emotional regulation, and transactional support by developing personalized programmes to support children with ASD and facilitate collaboration among families, parents and teachers (Robinson et al., 2017; Walworth, 2007).

Overall, the consensus among participants was that while parents and professionals play a crucial role in supporting ASD children, they also require guidance, education and emotional containment throughout the challenging journey. The literature underscores the pivotal role of educational psychologists in supporting parents of children with ASD, aiding them to recognize, accept and manage their child's difficulties and impairments (Donald et al., 2010; Farell, 2004). It also highlights the considerable challenges families face in understanding and accepting an ASD diagnosis, suggesting that fostering a positive parent-professional relationship can greatly ease this process (Elder et al., 2017; Kalyva, 2013). Consequently, mental health professionals must adapt their approaches to incorporate and improve collaboration with parents, effectively communicating with them and engaging them in the therapeutic process (Bowker et al., 2010; Donald et al., 2010; Farell, 2004; Karst & Van Hecke, 2012; Robinson et al., 2017; Salgado-Cacho et al., 2022; Wetherston et al., 2017). Moreover, the literature indicates that parents who actively engage in collaboration with mental health professionals tend to enhance their own skills, knowledge, and assertiveness (Catalano et al., 2018; Kalyva, 2013). Research suggests that such active parental involvement not only creates a sense of efficacy and personal control but also fosters their development as more effective and less anxious caregivers (Kalyva, 2013). This reflects the goals described by many participants, such as Participant B, who stressed the importance of supporting parents to alleviate their stress, sometimes leading to parents seeking support just for regulation. However, this viewpoint is not fully consistent with the South African-based literature, as Guler et al. (2017) found that parents often reported a lack of support from healthcare professionals and limited assistance from extended family members, which took its toll on their mental health and overall well-being.

Although there was a strong emphasis on psychoeducation and collaboration in the data, two participants also noted the value of a client-centred approach, embracing flexibility and tailoring interventions to meet the unique needs of each individual child with ASD. One participant mentioned that she gained insight into the treatments she uses while working as a facilitator in a school where she supported two children with ASD. During this time, she actively participated in the therapies the children received, which contributed to her professional development. She subsequently developed her own strategies and continues to refine and adapt them according to the unique needs of each child with ASD she works with. Psychoeducation, supporting parents of children with ASD, adopting a client-centred approach, and tailoring interventions to meet the unique needs of each child with ASD are all elements corroborated by the literature (Franz et al., 2017; Guler et al., 2017; Kalyva, 2013; Munro, 2011; Robinson et al., 2017; Salgado-Cacho et al., 2022; Wetherston et al., 2017).

Theme 3: The factors that influence educational psychologists' decision-making for intervention or treatment

There were several factors that participants identified as influencing their decision-making for intervention or treatment when working with ASD children: contextual considerations, individual needs, funding for treatment, and self-directed learning and skills development.

Subtheme 1: Contextual considerations

Five participants emphasized the importance of considering the context in the treatment of children with autism spectrum disorder (ASD), while three did not delve into contextual factors. Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) highlighted the necessity of adapting interventions for contextual effectiveness, recommending that training facilitators and parents apply approaches in the home or school context:

> *So where the intervention takes place is the context that the child or learner actually lives in and works and learns.*

This was consistent with Participant D's (registered for 20 years; 20 years of experience with hundreds of ASD cases) description of her decision-making process in the context of treating children with ASD. She explained how she determined which treatments to employ for a child with ASD:

> *So, I base it really on sort of global information from various contexts, so I want to know what is he doing at school, I want to know what he is doing at home. I want to know what he is doing in speech therapy. I want to know what he is like out with his friends. I want to know all of those things.*

Participant E discussed the challenge of context blindness in ASD, emphasizing the importance of educating children about different contexts and tailoring interventions that span various settings.

In summary, these participants collectively recognized the significance of contextual considerations in the treatment of children with ASD, underlining adaptation, collaboration and education across various contexts. This resonates with the literature, which emphasizes the importance of considering immediately relevant factors when adapting interventions for different contexts (Guler et al., 2017). Previous research has demonstrated that practitioners' treatment choices are influenced by various factors, including the best available evidence, client characteristics, economic and social resources, client preferences, and practitioners' experience, skills, and knowledge (Guler et al., 2017; Robinson et al., 2017; Spring et al., 2008). These factors guide the adaptation process and inform decisions about what interventions are most suitable for individual children (Guler et al., 2017; Robinson et al., 2017; Spring et al., 2008).

Subtheme 2: Considering the child's needs and interests as a part of treating a child with ASD

All the participants emphasized that they took into consideration the unique needs and interests of ASD children, avoiding a one-size-fits-all approach to treatment or intervention. Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) set the foundation by emphasizing individual differences when she stated:

> *What works with one child is not helpful with another.*

Building upon this, Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) reinforced the need for flexibility, acknowledging the unique features and behaviours of each child with ASD. He stressed:

> *If you met one child with ASD, you have met one child with ASD. They all have different features and they all have different behaviours so you cannot be rigid in your implementation… if I cannot get through to them or if there is no rapport, I am going to hit a brick wall every time.*

This chimes with Participant D's (registered for 20 years; 20 years of experience with hundreds of ASD cases) emphasis on how she customizes treatment plans for each child, recognizing the necessity of tailoring interventions:

> *So, each child's treatment plan is very much based on them.*

Collectively, these participants echo the literature by highlighting the significance of individualized and flexible approaches in addressing the diverse spectrum of ASD children (Munro, 2011; Robinson et al., 2017; Sadreddini, 2017; Vivanti & Hamilton, 2014). The literature underscores the influence of various factors – including the characteristics, values, and preferences of ASD children, as well as their environmental factors and contexts – on decision-making in psychosocial interventions (Munro, 2011). Also of critical importance is considering the cultural background of ASD children and recognizing its potential impact on treatment choices (Munro, 2011). Additionally, the literature highlights the necessity of aligning interventions with the individual circumstances, environment, interests, and needs of the child with ASD (Munro, 2011), a principle echoed by all participants in the discussion. Participant C aptly claimed that meeting one child with ASD means encountering one unique individual, thus pointing to the variability in ASD features and behaviours, cautioning against rigid implementation of treatments or interventions (Autism Speaks, 2022b; Thayer, 2016).

Subtheme 3: Medical aid funding as a challenge

Several participants, working in various settings, raised concerns about the challenges associated with medical aid funding for ASD services in South Africa. Three participants noted that medical aid schemes in South Africa no longer covered interventions by educational psychologists. One participant expressed frustration at the fact that medical aids regarded the psychologist’s diagnosis as insufficient for certain medications and interventions. Another participant returned to working within schools because of major medical aids discontinuing coverage for educational psychology sessions in private practice. Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) underscored the difficulty of sustaining consistent treatment, particularly for those unable to afford private therapy or facing rapidly depleting medical aid.

> *Hospitals are also providing services, but there is not enough for the children to have consistent treatment as if you would have a private therapy session.*

Building upon this, Participant B (registered for 14 years; 14 years of experience with a few ASD cases) emphasized the need for creative solutions in view of the short duration of medical plans, and Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) delved into the disparities between private and government services, particularly in rural areas facing financial constraints:

> *If you are rural let alone have the finances for it, you won't…you are going to get OT, out here, our national hospitals here, if a child goes to speech or .T, they go for half an hour once a month. Whereas, a child who is on medical aid, they might get a 45-minute session once a week.*

She also touched upon the unfavourable disposition of medical aid funds towards educational psychologists.

The participants collectively highlighted the complexities of medical aid funds and their impact on the accessibility and sustainability of ASD services in South Africa. The absence of medical aid coverage for ASD treatments is consistent with findings in the literature, which revealed that ASD parents complained about a lack of support and funding for external therapy outside of the school (Wetherston et al., 2017). Moreover, medical aids often do not cover the majority of costs due to ASD not being recognized as deserving of primary healthcare benefits (Wetherston et al., 2017). The existing literature does not directly address instances where medical aids reject psychologists' diagnoses as insufficient for certain medications and interventions, or the fact that medical aid schemes in South Africa no longer cover interventions by educational psychologists. This raises significant questions about the potential implications of impending changes to South Africa's medical system, such as the National Health Insurance (NHI) proposal and the matter of the role that educational psychologists will play in future government systems.

Subtheme 4: Self-directed learning and skills development

Several participants emphasized the importance of self-directed learning and international resources in expanding their knowledge about treating children with ASD. Four participants mentioned relying on their own research and reading, and international online training to gain insights into different treatments and interventions. Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) shared her experience of discovering valuable resources online:

> *I found these autism experts, and they have been amazing, and I learnt a lot through their book so a lot of sort of self-teaching and just looking far and wide for all sorts of therapies and treatments that are available.*

Participant E (registered for 20 years; 5 years of experience with ASD cases) emphasized the value of a [specific centre for neurodiversity]'s online support, which had been easily accessible and had aided in expanding her knowledge of ASD-related topics and training.

> *…they offer online courses that you can access, and they almost have a library of all their previous courses that you can actually buy… They are also having this…conference… and that is an international conference….*

Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) highlighted the prevailing lack of awareness of treatment options in South Africa

> *…it is quite prevalent, and you do get exposed, but we do not know what the treatment options are, and we don't have an understanding of why or what caused it or anything like that, and I think that is where we lack in South Africa.*

These quotations collectively illustrate some of the participants' proactive efforts in seeking knowledge beyond formal training and utilizing international resources to enhance their understanding of ASD treatments. They also point to the absence of sufficient training in ASD treatment for educational psychologists in South Africa. The literature highlights that there is a pressing necessity for ASD research in sub-Saharan African contexts, as knowledge about the prevalence and treatment of ASD in Africa lags behind that of other continents (Aderinto et al., 2023; Bakare & Münir, 2011; Guler et al., 2017). However, even in an international setting, Robinson et al. (2017) found that educational psychologists tended to rely on self-study and online research for information about ASD treatment. Their study involved 146 educational psychologist practitioners in the UK and Ireland and investigated their use of 31 evidence-based practices for treating ASD. According to the findings, educational psychologists primarily obtained information about ASD interventions from colleagues or the internet (journal articles or reports) (Robinson et al., 2017). This suggests that there may be a need for the inclusion of more ASD-specific content in the training curriculum for educational psychologists, both internationally and in South Africa. It also emphasizes that the degree to which educational psychologists are motivated to independently explore treatment options and research ways to help the child with ASD will affect the types and quality of the treatments they can offer to the child and their family.

Theme 4: The level of involvement of educational psychologists in each stage of the treatment process

The fourth theme includes sub-themes devoted to educational psychologists' involvement in the different stages of the treatment process: the initial phase of treatment, coordinating multidisciplinary teams, the empowerment of others, assessment and diagnosis, and therapeutic functions.

Subtheme 1: The initial phase of treatment

Several of the participants highlighted the crucial initial step of building a connection when treating children with ASD. Four participants pointed to the importance of rapport-building and creating a safe, comfortable space before delving into specific treatment programmes. While one participant suggested focusing on spontaneous communication and interaction, another stressed the significance of giving ASD children space to settle into the context. The person-centred approach was favoured by one participant, who emphasized the value of a calm, attentive demeanour in establishing trust.

Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) underscored the critical role of rapport in the therapeutic process:

> *If I cannot get through to them or if there is no rapport, I am going to hit a brick wall every time.*

In line with this perspective, Participant G (registered for 10 years; at least 3 years of experience with ASD cases) spoke of the significance of a containing space. She suggested that having a space that provides containment may be more important than specific skill-building programmes:

> *Maybe it wouldn’t even be that you've got a treatment program going, you, it would literally just be a little containing space for that child whenever you get to have a session with that child. Uhm, and that could be more important than working on communication skills or social skills.*

The literature underscores the significance of evidence-based treatments for ASD while acknowledging the absence of a single, definitive approach (Barthélémy et al., 2019; Robinson et al., 2017; Salgado-Cacho et al., 2022; Walworth, 2007; Wetherston et al., 2017). Keenan and

Dillenburger (2021) endorse multifactorial considerations in ASD treatment selection. There is also considerable literature supporting the development of a good therapeutic relationship between psychologists and their clients as a necessary first step in successful psychological treatment (Albaum et al., 2022; Brewe et al., 2020; Guler et al., 2017; Kalyva, 2013; Munro, 2011; Robinson et al., 2017; Sadreddini, 2017; Salgado-Cacho et al., 2022; Spring et al., 2008). These studies insist that this is an extremely important part of the treatment process for educational psychologists working with children with ASD. Given the importance of this step in the process, it may be useful for educational psychology students to receive more specific training on how to build a good therapeutic rapport with individuals diagnosed with ASD.

Subtheme 2: Coordinating multidisciplinary therapeutic teams

Five participants, including Participant G, highlighted the collaborative and coordinating role of educational psychologists in the treatment process. The participants described the educational psychologist as a central figure, coordinating and liaising with various therapists, supporting teachers, and providing psychoeducation to parents. Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) highlighted that engaging with other professionals who interacted with the individual diagnosed with ASD provides valuable insights into the child's behaviour across various environments, thereby enhancing the effectiveness of interventions. This broader perspective serves to enhance medical interventions for all stakeholders involved:

> *I also have to connect with the psychiatrist or the paediatricians who work with these learners are very important so that they can have an idea of how this child behaves in the school context so that they can provide them with adequate medical interventions, so it is quite holistic, the support that the educational psychologist provides.*

Participant E (registered for 20 years; 5 years of experience with ASD cases) likened the role of an educational psychologist to a central hub in the support network for individuals with ASD. While not always directly involved in therapy sessions, they play a vital role in understanding and addressing the broader context of the individual’s needs and challenges:

> *Our role as an educational psychologist is almost a little bit like a hub. We do not necessarily always supply the therapy itself, but we often are the person that is doing the psychoeducation and that’s containing the larger context. I mean it’s coordinating the various therapists.*

This echoes Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases), who described the collaborative efforts of doctors, speech therapists, occupational therapists, schools, parents and others involved in supporting the ASD child. Furthermore, she highlighted her role as providing support and guidance to complement the contributions of other professionals:

> *My role will be to support and to guide a lot of these things.*

Overall, these descriptions evoke the multifaceted and supportive role of educational psychologists in coordinating holistic interventions for children with ASD. This is consistent with the literature, which indicates that ASD treatment is most successful when there is collaborative learning and a sense of professional support among individuals from diverse disciplines working together in a multidisciplinary team (Dillenburger et al.,2014; Salgado-Cacho et al., 2022; Sinai-Gavrilov et al., 2019; Wetherston et al., 2017). The evidence suggests that team-based treatment is one of the most effective forms of ASD treatment and is well suited to developing an individualized approach of maximum benefit to the child (Dillenburger et al., 2014; Karst & Van Hecke, 2012; Sinai-Gavrilov et al., 2019; Wetherston et al., 2017).

Subtheme 3: Providing empowerment to others involved in the treatment process

Two participants highlighted the role of an educational psychologist in empowering various stakeholders involved in the treatment process for children with ASD. Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) noted the importance of departmental empowerment to expand service accessibility. Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) echoed this sentiment, emphasizing awareness and training for professionals:

> *Another area that I think is very important is also constant awareness of the community, community awareness and also training professionals and providing support to other professionals that need that support.*

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) and Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) both pointed to the importance of empowerment in their respective roles. Participant B recommended empowering children with ASD to develop their resilience and independence and avoid depending on her:

> *…and just to build them up and bring their resilience back… so, you give them something, you give them a skill. I always have to give someone a skill so that they can take it with them, and they feel empowered, and they feel that they have got something that they can work with.*

Participant H voiced a similar sentiment by emphasizing the empowerment of parents and the necessity for parents to recognize their capability and capacity to bring about change.

These participants collectively extol the significance of empowerment, whether for individuals with ASD, professionals working with them, or parents of individuals with ASD.

They underscore the importance of imparting skills and nurturing a sense of capability and independence. The literature supports the idea that effective ASD treatment involves collaborative learning and professional support within a multidisciplinary team (Dillenburger et al., 2014; Sinai-Gavrilov et al., 2019; Wetherston et al., 2017). It also recognizes the crucial role of educational psychologists in empowering various stakeholders, including parents, in the treatment process. This empowerment extends to improving parents’ understanding and management of their child's challenges, fostering collaboration with mental health professionals, and enhancing parents’ efficacy (Elder et al., 2017; Kalyva, 2013). Research has indicated that such empowerment leads to reduced parental stress and fosters the development of more confident and effective parents (Elder et al., 2017; Kalyva, 2013).

Subtheme 4: Engagement of educational psychologists in the assessment and diagnostic phases of treatment

Six participants actively engaged in both diagnosis and assessment processes to determine the level of support needed for children with ASD. Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) emphasized the collaborative effort involving schools and assessing support levels for placement decisions:

> *I do a lot of assessments to look at what their level of support might be and to see if they require to be in a special school or not… and getting them place in appropriate schools.*

This is consistent with the literature, which construes the role of an educational psychologist as encompassing assessing, diagnosing, and intervening to enhance human functioning in learning and development contexts (Department of Health, 2017). This includes evaluating cognitive, personality, emotional, and neuropsychological aspects relating to individuals’ learning and development within their areas of expertise. Additionally, the literature recognizes the pivotal role of educational psychologists in enhancing the functioning of ASD children within the school environment (Donald et al., 2010; Farell, 2004). This resonates with the participants' descriptions of their role in the assessment and diagnosis processes, wherein they determine the necessary level of support for ASD children (Donald et al., 2010; Farell, 2004). Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) echoed Participant A's perspective as he acknowledged the key role of educational psychologists as a first point of contact for diagnosis, assessment and developmental evaluation:

> *So, I do quite extensive assessments on my learners before I start the treatment option.*

He described the various assessments and extensive questionnaires that he uses with his ASD clients. He highlighted that the autism diagnostic observation schedule (ADOS) and the autism diagnostic interview-revised (ADI-R) are commonly used in practice as well as clinical observations:

> *we also use the autism diagnostic observation schedule (ADOS), the ADI-R is also something that is used quite often in practice then the social responsive scale which is also valuable especially in terms of making parents more aware of social fallouts so we use quite a lot of that just to substantiate and then also a lot of historicity so we have like you said just normal interviews with the parents where we get a lot of that information and then of course teachers accounts of behaviours that we see and then we do a lot of observation, a lot of clinical observations that we use in our evaluations… and you don't have to necessarily use all of these approaches on every single child and it depends from child to child which ones you are going to use. If I have a lot of background, I am not necessarily going to use the ADOS or the ADI-R because the ADI-R takes a lot of time, so it all depends on the amount of time we have available.*

Originally designed for research purposes, the autism diagnostic interview-revised (ADI-R) and the autism diagnostic observation schedule (ADOS) have emerged as high-quality diagnostic tools for ASD. Often administered together, these assessments improve agreement among diagnoses by integrating information from various sources regarding an individual's past and present behaviours (Oh et al., 2021). The ADI-R is a semi-structured interview conducted by trained examiners with caregivers of individuals suspected of having ASD. Caregivers provide information across key domains including communication, social interactions, repetitive behaviours, and the onset of ASD-related symptoms. The examiner rates previous and current behaviours for severity and uses a diagnostic algorithm related to age and cut-off scores to determine a diagnosis of ASD (Oh et al., 2021). The autism diagnostic observation schedule (ADOS) is a standardized, semi-structured assessment that includes structured and less formal social scenarios designed to prompt social interaction. It includes structured activities and play scenarios to provide consistent contexts for observing behaviours relevant to understanding ASD (Kim & Lord, 2011).

Two participants mentioned that they had heard of the ADOS but had not employed it themselves. Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) emphasized the importance of incorporating more assessments and testing into the curriculum for future educational psychology students:

> *…Like ADOS. I can't remember what it stands for. I wasn't trained in it because I didn't have to do it. Uhm, but there are, there are tests and obviously there's check sheets as well.*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) revealed that she used the ADOS as part of her assessments for teenagers, noting the need to adapt the test because of certain limitations in the questions posed. She elaborated:

> *I use the ADOS for assessments and then I use... the ADOS has limitations because you are supposed to use it with teenagers and adults but the things that they ask and everything is kind of demeaning for an adult to do some of those things so I don't do that. With teenagers what I do is if I feel like some of the activities, because module three you have to do things like puzzles and funny things and these kids....I mean a 17-year-old is not going to…you are going to lose him if you do that with him. So, I will sometimes ask some of the questions that's in the ADOS, the emotional questions, the social questions, social difficulties and all of that...often what I do with teenagers is that I have an assessment interview with the parents and the individual and then I go through the diagnostic criteria in the DSM-5 and I ask various questions around that and then adults, I get them to do their life story.*

This indicates that both participants C and D modified their diagnostic assessments to best suit the varying needs of their clients, ensuring that they maximized the effectiveness of the time spent with them. This is in line with the recommendation in the literature that educational psychologists should not rely solely on formal assessment tools to develop a comprehensive understanding of the child. It is equally important for them to gather information from both parents and the school environment (Sadreddini, 2017). This approach facilitates the creation of a holistic assessment, crucial for determining optimal treatment strategies (Sadreddini, 2017). It suggests that while providing formal assessments is an important part of an educational psychologist's role, it is not the only component. Rather, a holistic assessment is essential for a thorough understanding of the child's needs (Robinson et al., 2017; Sadreddini, 2017; Vivanti & Hamilton, 2014). This necessitates the adaptation of formal assessments to accommodate contextual factors, a practice clearly exemplified by participants C and D in their assessment methodologies. Furthermore, the responses of two participants highlighted the importance of exposure to specific assessment tools during training to increase the use of these tools in the treatment of clients.

Participant D also discussed assessing the level of functioning of her ASD clients, particularly nonverbal children, using the Griffiths mental development scales:

> *It's very difficult to determine what level they are on and this especially with nonverbal kids so I use the Griffiths, it's a developmental scale that is a very nice scale which you can use with nonverbal kids.*

The Griffiths mental development scales (GMDS) comprise two distinct developmental scales (one for infants and toddlers between 0 and 2 years old and one for young children between 2 and 8 years old) that are accessible and useful to evaluate all aspects of the development of young children (Jacklin & Cockcroft, 2013; Laughton et al., 2010; Pino et al., 2022). The GMDS have been widely used globally, including in South Africa, despite their having been standardized in the UK (Jacklin & Cockcroft, 2013; Laughton et al., 2010). It is not known how extensively they are used by South African educational psychologists as part of diagnosing ASD, but they are widely researched and used in the South African context generally so their use by some educational psychologists for this purpose seems likely (Laughton et al., 2010; Pino et al., 2022). However, Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) indicated her awareness of the GMDS but highlighted its perceived high cost to use. She also underscored her lack of training in the use of this assessment.

Emphasizing the significance of exposing future educational psychology students to a range of assessments, including the ADOS and GMDS, she advocated a diverse training approach:

> *That you can purchase for a fortune that help to, the Griffiths is another one. I think it's a developmental test that that will show if there's a like on the spectrum, but that's identifying whether the child has Autism.*

Participant F (registered for 4 years; 15 years of experience with a few ASD cases) described her collaborative work with a neurological paediatrician. Her focus includes assessment, observation and ASD diagnosis, with an emphasis on providing coping strategies and creating a supportive environment for social skill development:

> *I usually work in collaboration with a specialist neurological paediatrician, and we confirm or refute each other's diagnoses.*

In summary, the participants indicated that they played a significant role in diagnosing ASD, conducting assessments, and providing essential support and guidance throughout the process. The evidence points to the importance of the diagnostic and assessment roles of educational psychologists when working with children with ASD in the South African context.

Subtheme 5: Therapeutic functions of educational psychologists during treatment

Educational psychologists play various roles in the treatment process for children with ASD. One of the participants observed that she did not do any individual therapy with children and that her role involved guiding the people who were working with the children. Six of the participants thought that the educational psychologist's role in the treatment process involves therapy. One of the participants said that in addition to working with the child, she gets the parents involved in the therapy through relational therapy, while also giving guidance to parents and helping them emotionally in a more therapeutic sense. One participant noted that he did a lot of group-based therapy.

Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) indicated that he focused on group-based play therapy, addressing social skills, turn-taking, peer awareness, patience and tolerance:

> *I do a lot of group-based play therapy to help with the social interventions so social skills, turn taking, peer awareness is a big one and then also just patience and tolerance for others…so all of these kinds of things, just communicating your perspective in a more tolerable way and taking other people into consideration so we work on that.*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) provides parental guidance and supports the school of the child with ASD. Additionally, she conducts therapy sessions directly with the child with ASD:

> *I do parent guidance, I go to schools and I give them guidance…I do therapy.*

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) shared a similar perspective as she described her provision of a supportive platform for parents of children with ASD during therapy sessions. This approach aims to facilitate a better understanding of their child's needs and behaviours:

> *The type of therapy that I started doing is like a relational therapy where I get the parents in as a supportive person, and we do art therapy together so that it is more supportive and then the parent can also see how the child expresses some of the challenges and how they grow and things that they are not always able to provide or communicate….we also have to support the parents because it brings a lot of stress and concern so sometimes even the parents come to see me just to regulate.*

In summary, educational psychologists contribute to the therapeutic process, employing a range of approaches, including group-based play therapy, person-centred therapy and client-centred therapy, depending on the individual needs of the child and family. The insights provided by the participants regarding their therapeutic roles in the treatment journey of children with ASD are consistent with the literature describing the responsibilities of educational psychologists. These include enhancing the child's functioning within the school environment, collaborating with and assisting parents in understanding, accepting, and managing their child's challenges, as well as recommending, designing, and implementing appropriate strategies and therapies (Donald et al., 2010; Farell, 2004). However, locating specifically South African literature that directly addressed the therapeutic roles of educational psychologists in the treatment process of ASD children proved challenging. Unlike the testimony of the participants, who reported offering support and guidance to parents of ASD children, South African studies spotlight the challenges faced by parents and caregivers within the healthcare system, notably the lack of support from healthcare providers. These hurdles allegedly contribute to feelings of being overwhelmed among caregivers (Guler et al., 2017; Wetherston et al. 2017). There thus appears to be a need for more information about the role, challenges and overall experience of education psychologists in the therapeutic process for ASD in South Africa.

Theme 5: Educational psychologists' perspectives on their role in treatment relative to others

There were several emerging sub-themes regarding the role of educational psychologists in the treatment process relative to others involved, including teamwork when treating children with ASD, the roles of occupational therapists, speech therapists, neurologists and paediatricians, psychiatrists, schools and family members.

Subtheme 1: Teamwork in treating children with ASD

The importance of working as part of a team in treating children with ASD was emphasized by seven participants. They highlighted the effectiveness of collaborative efforts and the challenges of working in isolation.

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) acknowledged the effectiveness of multidisciplinary teams and expressed a desire for enhanced collaboration:

> *I think in private practice it's not always the case but I used to work in a school, in a multidisciplinary team so I feel that if we could be working in teams, it is always so much more effective like you said the OT with the cards and the teacher etc. it would be wonderful to work in a multidisciplinary team.*

Another participant had transitioned from private practice to a school environment. She outlined the challenges faced in private practice and the advantages experienced in the school setting, particularly the benefits of collaborating with members of a multidisciplinary team.

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) shared her experiences from both South Africa and overseas, remarking on the stark contrast in school support settings and emphasizing the advantages of multidisciplinary teams. She outlined the school support setting overseas before delving into her profound understanding of ASD gained through her work in an ASD school in South Africa:

> *[Overseas] I worked in a class that had 6 learners and 6 adults so it was the ideal setting and we had psychologists, we had speech therapists, we had occupational therapists, we had social workers, we had personal assistance for a particular child, it was amazing what they could get right.*

She then described her experience of working in an ASD school in South Africa:

> *When you work in a multidisciplinary team, you learn incredibly so much about things that you can say okay, I know this much about it but I know enough to say "you need to go and see a speech therapist, and they should be doing this and this and this with you."*

This resonates with findings reported in the literature, which reinforce the participants' views on the advantages of collaborative efforts and the drawbacks of working in isolation, in line with empirical evidence suggesting that team-based approaches are the most effective for ASD treatment (Dillenburger et al., 2014; Karst & Van Hecke, 2012; Wetherston et al., 2017). Such models not only facilitate individualized interventions but also make use of diverse expertise to benefit the child (Sinai-Gavrilov et al., 2019). Moreover, the literature points to the significance of understanding the roles of educational psychologists in relation to other practitioners in the treatment process (Dillenburger et al., 2014; Karst & Van Hecke, 2012; Robinson et al., 2017; Sadreddini, 2017; Sinai-Gavrilov et al., 2019; Vivanti & Hamilton, 2014; Wetherston et al., 2017). While educational psychologists play crucial roles in ASD intervention, the complex nature of ASD requires collaboration with professionals from various disciplines. This interdisciplinary approach allows for the integration of different knowledge areas and the development of optimal treatment strategies (Dillenburger et al., 2014).

Given the evolving nature of the ASD field, continuous collaboration among educational psychologists, speech therapists, occupational therapists and other professionals is essential to keep up with developments. This collaborative effort, together with a holistic and individualized approach, will ensure that treatment strategies remain effective and responsive to the unique needs of each child (Robinson et al., 2017; Sadreddini, 2017; Vivanti & Hamilton, 2014). However, the literature notes that a multidisciplinary approach to ASD treatment is rare in

African countries, compounded by the absence of policies or guidelines for assessing, treating and supporting individuals with ASD (Aderinto et al., 2023; Ruparelia et al., 2016; Zeleke al., 2021).

Subtheme 2: The role of occupational therapists

Six participants highlighted the crucial role of occupational therapists (OTs) in the process of treatment for ASD. The involvement of OTs varies according to the child's needs, but tends to focus on sensory integration (Pfeiffer et al., 2011). Three of the participants mentioned the need for sensory integration in the treatment of an individual with ASD. One participant stressed that most ASD treatment, particularly treatment addressing sensory needs, is led by OTs. The collaboration between professionals, including OTs, was also emphasized as essential for comprehensive care. Referring children to OTs for sensory integration therapy, perceptual difficulties, and developing sensory diets was also discussed. Participants recognized the significance of OTs in teaching school readiness skills and social skills, and addressing sensory sensitivities. The low arousal approach in assessing sensory needs was considered valuable, with OTs playing a pivotal role. A team setting with OTs, speech therapists, and other professionals was construed as ensuring a holistic approach to ASD treatment.

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) underscored the substantial sensory requirements of children with ASD and stressed the necessity of having an OT specialized in sensory integration as a crucial component of the treatment process:

> *So, often we see that there are significant sensory needs around children so an OT that is working specifically with sensory integration is often very useful because a lot of the*

> *other things you don't get to do if you haven't… so it is sometimes useless to try and work on other things if you haven't looked at the whole sensory system.*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) echoed similar sentiments as she expressed the importance of sensory integration therapy in assisting an ASD child:

> *They are overwhelmed on a sensory level, on an anxiety level, on an emotional level so I work a lot with that kind of thing, so I work from that perspective, and I do feel that sensory integration therapy is very important. And so, trying to have a sensory diet that they are using to relax.*

Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) said that when she encountered sensory issues in her clients, particularly children, she brought an OT on board to make the necessary recommendations for addressing those concerns:

> *The sensory stuff, I don't know if …[laughs] ja, helping with either being oversensitive or seeking out stuff, usually I would notice if there's an issue and then I'd ask the OT to actually make the recommendation.*

Research has shown that the role of occupational therapists in ASD treatment internationally involves developing both nonverbal and verbal communication skills, adapting settings to fit the needs of individuals with ASD, educating caregivers and advocating for the child, and delivering occupation-based intervention (Hébert et al., 2014). In the treatment of younger children with ASD, occupational therapists frequently concentrate on enhancing sensorimotor skills and sensory processing, social-behavioural abilities and engagement, and self-care (Case-Smith & Arbesman, 2008). For older children and adolescents, occupational therapists may target social and behavioural skills, independence within the community, and employment (Case-Smith & Arbesman, 2008). This is in line with the participants' descriptions of the role of occupational therapists in the treatment process of ASD children in South Africa.

Occupational therapists typically work within a multidisciplinary team of experts to evaluate, develop, and implement individualized interventions for children with ASD (Case-Smith & Arbesman, 2008; Department of Education, 2015; Vivanti & Hamilton, 2014). This resonates with literature emphasizing the multidisciplinary approach required to support individuals with ASD, involving professionals such as psychologists, speech and language therapists, physicians, occupational therapists and special educators (Vivanti & Hamilton, 2014). All these professionals need to stay informed about evolving practices in the ASD field. Occupational therapists play a particularly vital role in early interventions to enable communication, especially when working with speech-language pathologists (Hébert et al., 2014).

Subtheme 3: The role of speech therapists in treatment

In the ASD treatment process, speech therapists (STs) play a crucial role by focusing on language difficulties and communication skills and addressing these (Karrim et al., 2022). All the participants emphasized collaboration with STs for effective support, and seven of the participants mentioned a specific role that they play in the treatment process.

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) specifically highlighted the resources available at schools, with a focus on lower-functioning ASD individuals. She stressed the crucial role of speech therapists in enhancing communicative skills:

> *I have also looked into the picture exchange communication systems that they use to help with the language aspect commonly used by speech therapists ….I think the best*

> *experience and tools are at the schools, specifically for the kids with ASD especially those on the lower functioning levels so there you have your OTs and speech therapists.*

Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) expressed a similar view, noting the vital contribution of speech therapists in augmentative communication and language development, particularly for nonverbal individuals. Additionally, she noted the availability of devices that aid communication:

> *I think the augmentative communication depends on their level, if they are nonverbal then the speech therapist is helping with that but if they need a voice recognition or in other words press a picture and it will talk for them.*

Participant F also noted the vital role of speech therapists in facilitating communication. She emphasized that both verbal and non-verbal learners benefit from speech therapy. Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) made mention of the impactful tools utilized by speech therapists. She specifically cited a referral to an international centre that specializes in supporting young ASD individuals experiencing communication challenges:

> *…for the kids that are very young and struggling with communication, I refer with them to [the centre]… So, the [centre] is based [overseas], and they are a bunch of speech therapists and they predominantly work with people who have got or young people who have got communication or autism difficulties and they have the most amazing programmes.*

In summary, these participants collectively recognized speech therapists as essential contributors to ASD treatment, highlighting their role in providing tailored interventions for effective communication and social skills development, with a specific emphasis on different needs and age groups.

Research has shown that the role of speech therapists internationally in treating ASD focuses on promoting more effective communication (Araujo et al., 2020: Mandak & Light, 2018). Speech therapists play a vital role in helping children with ASD because of the high prevalence of symptoms linked to language difficulties, speech disorders and communication issues (Araujo et al., 2020). An international survey was conducted to explore the role of STs in the treatment of ASD in various countries (Gillon et al., 2017). Many STs indicated that their role extended to contributing to the diagnosis of ASD as well as using a range of assessment tools and methods to evaluate the communication abilities of children with ASD (Gillon et al., 2017). Interventions widely used by STs included AAC and PECS. Furthermore, the role of STs commonly included collaborating with other professionals involved in the treatment process and with parents of children with ASD (Gillon et al., 2017: Wetherston et al., 2017). According to the experiences shared by participants, these are precisely the treatments and interventions employed for individuals with ASD in South Africa.

The integration of technology has become increasingly prevalent in speech therapy for ASD individuals, helping with the development of verbal, nonverbal and social communication skills (Araujo et al., 2020). At times, speech therapists may engage in remote work, overseeing planned treatments and providing technical training to families of individuals with ASD (Araujo et al., 2020). The South African literature has similarly described how families can extend therapy to the home setting through training, participating in goal setting, collaborating with the treatment team, contributing to programme delivery, and engaging in programme evaluation (Wetherston et al., 2017.) This may be particularly valuable given the restricted availability of therapeutic services in South Africa for ASD within the public health sector, where children may face lengthy waiting times for speech or occupational therapy services, ranging from 1 to 6 months (Guler et al., 2017).

Subtheme 4: Involvement of neurologists and paediatricians

Six participants highlighted the crucial role of neurologists and/or paediatricians in the ASD treatment process. While two participants did not specifically mention these specialists, others were explicit about their significance in diagnosis, medication and confirming ASD features.

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) stressed the importance of specialized training. She believed that professionals should discern when and where to refer individuals, cautioning against a simplistic approach solely focused on diagnosis or medication.

> *We should be informed, we should be trained and we should be skilled and if we don't specialize in it then we should know where to refer to and how to find these people or places and put them in the right direction and not only sending them to the paediatric neurologist who will diagnose and that's it or medicate and that shouldn't be the only thing to do as we should really be able to support them and guide them or point them in the right direction.*

Both Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) and Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) noted the common practice of referring cases for confirmation of ASD diagnoses among paediatricians, neurologists, psychiatrists and educational psychologists. According to Participant C:

> *So a lot of paediatricians, neurologists and all of that but also psychiatrists refer to us as confirmation of autism so if it is that then we know there are features of autism already or we are also confirming whether there is autism or not.*

This aligns with Participant F's mention of collaboration with a specialist neurological paediatrician, where mutual confirmation or refutation of diagnoses occurred.

Overall, the data evidences the collaborative role of neurologists and paediatricians in the comprehensive ASD treatment process, including diagnosis and medication (Hyassat et al., 2023; Ivanov et al., 2021; Rhoades et al., 2007). The literature also insists on the diagnostic role of paediatricians, psychiatrists, and psychologists, either individually or as part of a multidisciplinary team. Globally, it appears that the current diagnosis of ASD commonly involves evaluations conducted by multidisciplinary teams or competent individual specialists (Hyassat et al., 2023; Ivanov et al., 2021). There yet remains wide variability in the ASD diagnostic process, as it depends upon the available healthcare systems and resources in each country (Hyassat et al., 2023; Ivanov et al., 2021; Kantawala et al., 2023).

Research in the United States of America has indicated that paediatricians play a vital role in diagnosing individuals with ASD and guiding families through a range of treatment approaches (Committee on Children with Disabilities, 2001). Moreover, they facilitate the enrolment of ASD children into suitable early intervention programmes aimed at enhancing their skills and developing strategies to reduce repetitive or maladaptive behaviours (Committee on Children with Disabilities, 2001). Furthermore, paediatricians assist families in managing the stress associated with the diagnosis by providing information about community resources and parent support organizations (Committee on Children with Disabilities, 2001). The participants in this study highlighted the diagnostic role of paediatricians for ASD in South Africa and did not draw attention to a referral role. This may be a result of the limited treatment and support resources available in South Africa compared to those available overseas (Aderinto et al., 2023; Guler et al., 2017).

Subtheme 5: Psychiatrists' role in the treatment process

Four participants did not mention psychiatrists in the treatment of ASD, while four drew attention to their role. Participant C highlighted collaboration with psychiatrists advising on medical and behavioural interventions. Participants D and E underscored the pivotal role of psychiatrists in prescribing medication for individuals with ASD. Additionally, Participant E (registered for 20 years; 5 years of experience with ASD cases) highlighted the importance of involving psychiatrists and/or paediatricians in the treatment process as many children with ASD are predisposed to conditions such as anxiety, depression, and attention difficulties:

> *Then, often a psychiatrist is involved because I think a lot of children on the spectrum have extremely high anxiety levels. You know, there can be depression as well, so I think that has to be kept in mind, and I think also their attention as there is an aspect of executive functioning and attention regulation which are often found within the spectrum. So, I often find that I am working closely with the paediatrician and/or a psychiatrist in that regard as well…The psychiatrists are working with the medications and the pharmacological support of the child.*

Research has shown that the role of psychiatrists in treatment internationally involves prescribing medication for ASD individuals, alleviating distress associated with medical care, and providing guidance to medical colleagues (Thom et al., 2019; Xiong, 2017). Additionally, psychiatrists play a part in evaluating cognitive and language abilities, comorbid psychiatric conditions, responses to medication, and histories of challenging behaviours (Thom et al., 2019).

This resonates with the viewpoints expressed by the four participants in this study, who noted the important role of psychiatrists in prescribing medication, collaborating with other professionals, offering guidance on medical and behavioural interventions, and addressing symptoms experienced by patients with ASD. In a study conducted in the United Kingdom, Crane et al. (2019) found that psychiatrists treating ASD felt that there were inadequate support measures and services available for patients and their families, and that enhanced ASD specialist training was needed for all members of multidisciplinary ASD treatment teams. This accords with participants’ perspectives on the need for additional training to treat ASD.

Subtheme 6: The role of teachers in the treatment process

Five participants mentioned the crucial role of teachers in the treatment process for ASD children. Three of them deplored the lack of knowledge among teachers about ASD and emphasized the need for education and training. Collaboration with teachers was seen as essential, with one participant noting how teachers use visual structures and supports in the classroom. Another participant emphasized the importance of including teachers, speech therapists, and occupational therapists because of their unique expertise. All affirmed the need for teachers’ involvement in understanding and managing ASD-related challenges, such as meltdowns.

Participant E (registered for 20 years; 5 years of experience with ASD cases) claimed that children with ASD often attempt to block out the world and settle in their own way. Because of a lack of understanding of ASD by teachers, they may inadvertently disrupt the child’s coping mechanisms by, say, pulling them out from under the desk, which can lead to a meltdown.

> *One of the things that many children on the spectrum do is they will go and crawl under a desk when they are dysregulated, and they need to be under a desk at that time. It’s not*

> *useful to pull them out from under the desk at that time because that is how they are regulating themselves. They are just trying to block out the world and just settle but often what would happen then is the teacher would pull them out from under the desk and then you have the meltdown.... You know [name removed], the school here in the [name removed] area. What they created is almost like a little sensory box that has a cloth, and the children can go in there if they need just downtime and they can just kind of desensitize [smiles].*

Overall, the consensus was that teachers play a significant role in supporting interventions and creating a conducive learning environment for ASD children. The insights provided by the participants closely align with existing literature, where teachers and parents are said to play a pivotal role in implementing ASD treatment and transferring the effects of treatment across environments (Burrell & Borrego, 2012; Ho et al., 2013; Kalyva, 2013; Robinson et al., 2017; Rojas-Torres et al., 2020; Salgado-Cacho et al., 2022; Wetherston et al., 2017; Walworth, 2007).

The ways in which teachers can support ASD children in the classroom include leveraging the strengths of ASD learners, a phenomenon where each child exhibits exceptional abilities or knowledge in specific areas, often surpassing their peers (Nthibeli et al., 2022). Acknowledging these strengths and fostering acceptance are vital for inclusive education (Nthibeli et al., 2022). Furthermore, individuals with ASD find it difficult to move from one activity to another due to the need for routine, which extends to the classroom (Leach & Duffy, 2009; Sefotho & Onyishi, 2021). For teachers to guide ASD learners in managing the transition from one activity to another effectively, they can incorporate visual schedules, prompts and reinforcements (Leach & Duffy, 2009; Sefotho & Onyishi, 2021). They can also integrate visual teaching methods into lessons because many learners with ASD are visual learners (Ganz et al., 2008; Leach & Duffy, 2009; Nthibeli et al., 2022). It is crucial for teachers to tailor their teaching methods to meet the needs of students with ASD (Leach & Duffy, 2009; Lindsay et al., 2014). They also need to build a rapport with parents and students and involve parents in the problem-solving process when there are difficulties, so that any effective strategies for managing these can transfer across environments (Leach & Duffy, 2009; Lindsay et al., 2014),

The participants made a crucial point that resonates with findings in the literature, namely, that there is a lack of awareness about ASD and how to assist children with ASD among teachers (Aderinto et al., 2023; Guler et al., 2017; Mathews et al., 2022; Wetherston et al., 2017; Zeleke et al., 2021). There is an urgent need for interventions that work to dispel stigmas and misconceptions about ASD and foster acceptance among educators as well as the broader community (Aderinto et al., 2023; Guler et al., 2017; Pillay et al., 2022b; Wetherston et al 2017; Zeleke et al., 2021). The literature emphasizes the importance of education and training for teachers because they must be equipped to effectively support children with ASD in the classroom setting (Guler et al., 2017; Mathews et al., 2022; Pillay et al., 2022b; Zeleke et al., 2021). Continuous professional development is recommended for teachers as significant improvements have been recorded in teaching effectiveness among teachers who engage in ongoing training courses (Nthibeli et al., 2022; Sefotho & Onyishi, 2021). Furthermore, the literature emphasizes the need to adapt psychology curricula to include training on collaborating with teachers for early detection, inclusion and effective learning (Guler et al., 2017; Mathews et al., 2022).

Subtheme 7: The role of the family in the treatment process

Most participants drew attention to the crucial role of family members, particularly parents, in implementing routines and interventions at home. Consistency among parents, teachers and others involved in the treatment process was deemed essential. Some participants stressed the importance of guiding parents, while avoiding overwhelming them with too many strategies.

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) noted the importance of consistency among parents, teachers and other stakeholders involved in the treatment process. She advised that sometimes adopting a "less is more" approach can help not to overwhelm them:

> *Sometimes less is more because giving millions of strategies is just overwhelming and they don't know where to start so just starting with something small and feel like it's so impactful.*

Participant B (registered for 14 years; 14 years of experience with a few ASD cases) thought it was necessary to break away from conventional setups. Her primary focus was to identify resources and promote creativity to facilitate the wider implementation of interventions, particularly for those with limited resources. Additionally, she emphasized a close collaboration with parents as an integral aspect of her approach:

> *We need to move away from that setup and start thinking out of the box and really go and find the resources and be creative and work with the parents so you don't work down such as I am the expert and you are the dummy and I have to talk down on you and tell you what you should do.*

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) delved into the pivotal role of parents, describing them as the glue that brings various elements together:

> *The parents is all about acceptance, behaviour, social skills and they are kind of the glue that sort of manages all of these things together.*

Participant F (registered for 4 years; 15 years of experience with a few ASD cases) echoed this belief in the crucial role of parents, extending it to include siblings as the most significant team members. From her perspective, parents and siblings play a central role in implementing routines and interventions within the home environment.

Together, these participants attested to the central, collaborative role of parents and siblings in the ASD treatment process, emphasizing the need for innovation and a break from traditional approaches. The literature notes the importance of taking into account the family dynamics of children with ASD when selecting treatments or interventions (Salgado-Cacho et al., 2022). The findings from a South African study by Guler et al. (2017) indicate that parents' treatment choices for their child were influenced by factors such as treatment availability, costs, trust in healthcare professionals and preferred parenting practices. This again points to the need for collaboration and support between families of ASD children and professionals throughout the treatment process (Bowker et al., 2010; Karst & Van Hecke, 2012; Robinson et al., 2017; Wetherston et al., 2017).

Additionally, the literature suggests that educational psychologists relying solely on formal assessment tools do not achieve a comprehensive view of a child with ASD, and that input from parents and schools is crucial for producing a holistic assessment and gaining a deeper understanding of the child's needs (Sadreddini, 2017). This underscores the vital roles of parents, extended family members and other professionals in the treatment process. Some participants also stressed the importance of guiding parents and avoiding inundating them with numerous strategies, which is consistent with the literature's claim that parents of ASD children can feel overwhelmed by the multitude of treatment options (Bowker et al., 2010; Karst & Van Hecke, 2012; Robinson et al., 2017). This once again highlights the necessity for collaboration between parents and professionals in developing a treatment plan tailored to the child's abilities and family environment (Bowker et al., 2010; Karst & Van Hecke, 2012; Robinson et al., 2017).

A research investigation was carried out in KwaZulu Natal involving the parents of children diagnosed with ASD (Reddy et al., 2019). Participants were recruited from three schools catering to learners with special needs. The study revealed that parents' interactions with healthcare professionals significantly influenced their experience of ASD, with professional attitudes playing an especially important role. Additionally, self-empowerment emerged as a crucial factor for families, who enhanced their knowledge and skills through various means such as online research, consultations with professionals, and engaging in discussion with their social circle (Reddy et al., 2019). Naidoo and Govender (2022) also recommend forming parent support groups in which parents can meet, exchange insights and work together to find solutions to challenges.

The participants and the literature highlight the challenges associated with accessing ASD treatment in South Africa due to the shortage of healthcare professionals and the increasing demand for government services (Aderinto et al., 2023; Guler et al., 2017; Wetherston et al., 2017; Zeleke et al., 2021). The involvement of parents or caregivers is consequently crucial for maintaining continuity and implementing routines and home-based aspects of intervention (Burrell & Borrego, 2012; Ho et al., 2013; Kalyva, 2013; Pillay et al., 2022b; Rojas-Torres et al., 2020; Salgado-Cacho et al., 2022; Wetherston et al., 2017). Moreover, as the literature notes, through proper training, families can extend speech and language therapy, occupational therapy and physical therapy to the home setting and thus enhance the long-term effectiveness of treatment (Harris et al., 2005; Karrim et al., 2022; Wetherston et al., 2017).

Theme 6: The challenges faced by participants when offering treatment

The study participants identified several challenges they encountered when implementing ASD treatment or intervention in the South African context. These included limited ASD-specific training, demands during treatment, a lack of support and basic awareness, insufficient government funding, long waiting periods for diagnosis, limited access to treatment, and the stigma and labels associated with ASD.

Subtheme 1: Limited ASD-specific training in South Africa

Participants identified a significant challenge in the limited availability of ASD-specific training in South Africa for educational psychologists. Many expressed the need to seek additional training independently, often relying on international resources because of the scarcity of local options. However, financial constraints were highlighted as a barrier to accessing overseas training, prompting calls for more affordable and accessible training within South Africa. While some online courses were available, participants noted difficulties with accessing certain programs. The lack of specialized training was emphasized, with one participant stating that basic training as an educational psychologist was insufficient for working effectively with individuals with ASD. The need for improved training to enhance early diagnosis and intervention was underscored.

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) observed that the foundational training she received as an educational psychologist was insufficient for working effectively with ASD, necessitating extensive additional training. She specifically mentioned relying on international training, predominantly undertaken online.

> *I also needed to do a lot of additional training in autism so that I was better equipped to work with people on the spectrum. The basic training that I got as an educational psychologist was certainly not enough, so I needed to do a significant amount of training ... The training that I've done was very much international training which I do online.*

She suggested that providing more training accessible to educational psychologists in South Africa could help with the challenges they face when treating children with ASD.

This is in line with the literature, and particularly with a study conducted in South Africa involving parents and/or caregivers of children with ASD, which revealed that 68% of them encountered challenges in accessing ASD treatment facilities and healthcare professionals, while perceiving treatment costs to be high (Wetherston et al., 2017). The literature suggests that increasing the number of trained professionals could mitigate obstacles to obtaining treatment in South Africa, benefiting both educational psychologists and the families of children with ASD (Wetherston et al., 2017).

This sentiment resonates with Participant H's (registered for 19 years; 10 to 14 years of experience with ASD cases) acknowledgement that when researching therapy for children with ASD, she preferred accessing information from the UK and America, implying the superior accessibility and relevance of international resources over local ones:

> *So information, magazines that they can and actually Autism Parenting Magazine, if you get the online version is quite affordable.*

Participant F (registered for 4 years; 15 years of experience with a few ASD cases) expressed frustration regarding the treatment options available in South Africa, noting their general inadequacy, with some being excessively costly and ethically dubious:

> *The treatment options are lacking in South Africa, and some are exorbitantly expensive and ethically questionable.*

Certain aspects of the responses provided echo the findings documented in the literature. Both international and South African studies find a pervasive deficiency in the training of mental health professionals to treat ASD (Aderinto et al., 2023; Dückert et al., 2023; Guler et al., 2017; Hahler & Elsabbagh, 2014; Mathews et al., 2022; Zeleke al., 2021). This inadequacy extends beyond South Africa, as international research consistently reveals a scarcity of mental health practitioners with specialized ASD training, despite ASD continuing to increase in prevalence (Dückert et al., 2023; Hahler & Elsabbagh, 2014; Mathews et al., 2022). This shortage emphasizes the necessity of training initiatives aimed at equipping school psychologists effectively to address the needs of children with ASD and developmental delays (Mathews et al., 2022). There is a general argument for adapting psychology curricula to narrow the knowledge gap in evidence-based treatments (Mathews et al., 2022). While diagnosis and assessment are adequately covered in international curricula, these aspects remain absent from South African psychology curricula (Aderinto et al., 2023; Guler et al., 2017; Zeleke al., 2021). This was demonstrated by a participant who mentioned that she misdiagnosed an individual in her earlier years of being a registered psychologist due to a lack of knowledge of ASD, before she underwent specialized training for working with ASD clients. Moreover, the literature underscores the significant challenge posed by the limited number of trained psychologists and other professionals in African countries, leading to a lack of access to culturally responsive and effective ASD treatment (Zeleke et al., 2021). The shortage of adequately trained healthcare professionals, coupled with limited resources and diagnostic tools in low-income African countries, limits accurate diagnosis and reduces access to essential services and support (Kantawala et al., 2023).

Subtheme 2: Demands during treatment

Three participants discussed the challenges they faced in managing the expectations placed on them during the ASD treatment process. Financial pressures, external demands and unrealistic expectations were the key concerns. Participant B (registered for 14 years; 14 years of experience with a few ASD cases) stressed the importance of a collaborative approach in supporting ASD children, highlighting the need to work together instead of having excessive pressure placed upon her to have all the answers:

> *This is a joint effort, and we have to work together so let's put our heads together.*

Participant G (registered for 10 years; at least 3 years of experience with ASD cases) pointed out the financial expectations and pressures associated with completing treatment within a predetermined number of sessions, a challenge compounded by the unpredictability of the therapeutic process:

> *They would like to know... it's going to be ten sessions and things are going to be better because it is expensive. They need to understand that it doesn't quite work like that.*

Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) shared a similar sentiment as she described the struggle with external demands:

> *It's what everybody else expects me to do [compared with] what I'm actually capable of doing... Fix them by next week, please.*

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) noted that professionals ought to have realistic expectations of parents and recognize the exhaustion they may experience while raising a child on the spectrum.

> *We must also be realistic of what expectations we have of the parents because parents are also exhausted.*

In conclusion, the psychologists in the sample and those working with ASD clients in South Africa, as well as parents of ASD clients, face diverse demands. The participants felt that a collaborative approach among all team members would be instrumental in addressing these challenges effectively.

This is an important finding because there is a noticeable gap in the literature regarding the demands and obstacles experienced by educational psychologists and other healthcare professionals involved in the treatment of children with ASD. The existing literature focuses primarily on the challenges encountered by parents or caregivers of children with ASD rather than the challenges faced by practitioners when treating ASD children in the South African context.

Subtheme 3: A lack of support and basic awareness

Seven participants pointed to the problem of the lack of support and awareness in environments where children with ASD interact. Parental denial of ASD diagnoses emerged as an obstacle, emphasizing the need for trust from both parents and children for effective treatment. Some parents, desperate for a cure and without much knowledge of ASD, were prone to adopt non-evidence-based approaches. A critical theme was the lack of awareness of ASD among teachers, necessitating grassroots training. Participants insisted on the importance of widespread education, involving clinics, universities, schools, teachers, nurses, doctors, and community awareness.

Participant D (registered for 20 years; 20 years of experience with hundreds of ASD cases) drew from her international and local experiences to plead for grassroots training in South Africa:

> *Clinics need to be trained. Uhm, universities, schools, and teachers too. The amount of teachers that actually understand what autism is, is shocking. They don't. Overall, there is a lack of resources. There is a lack of educating people so that they know what to do and they are completely under-serviced.*

Communication challenges among various stakeholders were noted, with calls for better collaboration and understanding. Participant B (registered for 14 years; 14 years of experience with a few ASD cases) underscored the challenge of gaining the trust of both parents and children:

> *I think one of the most challenging things we could face is because we are not only working with the kids but with the parents as well so you need to have the trust of both. That is what makes our job the most difficult because you have to have both on board, trusting you to work with that.*

This sentiment resonated with Participant C, who adverted to the challenge of parents seeking "miracle cures" and stressed the importance of raising awareness, starting at grassroots levels. This was in line with Participant D's emphasis on the need for comprehensive training across various sectors:

> *You will often hear people say that they started off by going to the clinic but then they were told that it is fine and the child will talk later and he is "just a boy". So if you start*

> *at ground level so that people get the right intervention from early on and then also training for all teaching students and all ECD practitioners so that the child does not have to be excluded and go to a special school to get the right support and they can be supported wherever they are.*

The emotional impact of labelling on children was discussed by Participant E, drawing attention to the importance of understanding the psychological impact of diagnosis. Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) highlighted the mismatch between the educational system's expectations and the needs of children with ASD:

> *We tend to try and give some guidance as to where, which high school a child would be, what varsity they might go to, what subjects they could take. Kids on the spectrum don't quite fit into the old mould…. For high school and will they manage in that system is also a challenge because the learning areas don't seem to match their needs.*

Participant A echoed this concern, saying there was a need for better communication and citing instances where teachers or schools exhibited reluctance to accommodate children with ASD.

Overall, participants argued for increased awareness, education and collaboration to address the multifaceted challenges associated with ASD, within both families and educational institutions. This reflects views prevalent in the literature, which describes limited public education about ASD in various African contexts as a major concern (Aderinto et al., 2023; Guler et al., 2017; Zeleke al., 2021). In a study conducted in the eThekwini Metropolitan Municipality that aimed to explore parental perspectives and awareness concerning treatments for children with ASD, the findings revealed that over 50% of parents either had only limited knowledge of or were unfamiliar with the specific treatments under consideration (Wetherston et al., 2017). The literature also attests to the extent to which a lack of public education contributes to misinformation about ASD in Africa, exacerbating the knowledge gap among professionals responsible for diagnosing and managing the disorder (Aderinto et al., 2023; Zeleke et al., 2021). Reports indicate that children with ASD in sub-Saharan Africa tend to receive diagnoses later than those in the USA due to a combination of factors including lack of awareness, stigma, and a shortage of professionals (Aderinto et al., 2023; Zeleke et al., 2021). The literature therefore emphasizes the critical importance of raising awareness and providing training for educators and healthcare workers on ASD in the region (Zeleke et al., 2021).

Subtheme 4: Insufficient government funding

A few respondents highlighted challenges in the employment landscape for educational psychologists in South Africa. Two participants noted that schools are not hiring educational psychologists in their designated professional roles. Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) highlighted the financial challenges posed by the high cost of living, inflation and inadequate salaries:

> *Most educational psychologists can’t afford to... go into a school-based environment because they can’t work for a school governing body post and make a salary that is less than a grade level one teacher.*

Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) mentioned that in larger cities like Johannesburg or Cape Town, there were more opportunities, but that the pay was often comparable to a teacher’s salary, leading to a dilemma for professional practitioners.

> *If you are in big cities like Joburg or Cape Town, there are jobs that the department pays for... I'm getting a teacher's salary at the moment, so it's like filling a teacher's post.*

This resonates with Participant A's (educational psychologist for a provincial department outreach team) perspective, who mentioned better opportunities in the province she works in.

> *…I can only speak for [my province]. I think we are quite lucky in comparison to the other provinces.*

These factors make it financially difficult for educational psychologists to work sustainably within school settings, forcing many of them into private practice and thus limiting accessibility for clients who cannot afford private services. This situation is highlighted in a South African study involving parents and/or caregivers of children with ASD (Wetherston et al., 2017). The study showed that many parents faced challenges because of a lack of government support and funding for therapy outside of the school setting. They also expressed frustration over medical aid coverage, as autism was not recognized for primary medical benefits (Wetherston et al., 2017). Moreover, insufficient government funding for educational psychologists in school environments forced many of the participants to assume roles that differ from their designated ones, often leading to lower remuneration (Pillay et al., 2022a).

Subtheme 5: Long waiting periods for diagnosis and limited access to treatment

Seven participants mentioned the challenges faced by parents and children with ASD in South Africa, emphasizing the shortage of resources that led to long waiting periods for diagnoses. Financial constraints were consistently highlighted by five of the participants, as impacting access to private therapy and comprehensive care. Intervention, once initiated, was often prolonged and inconsistent, depriving children of timely support. Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) underscored the impact of funding limitations on early intervention:

> *There are a lot of things available, but the funding is not always an option so for me the early intervention gap is a big gap because everyone is trying to provide as best as they can such as [name of NGO removed] and they are providing services. Hospitals are also providing services but there is not enough for the children to have consistent treatment as if you would have private therapy session but most of our people cannot afford private therapy.*

Participant A (registered for 10 years; 14 years of experience with hundreds of ASD cases) echoed concerns about financial constraints among families of ASD children. She noted that even after a diagnosis is made, families often struggle to afford the necessary interventions:

> *It is always the financial aspect because we already suffering financial in this country and now they have to take out a lot of money for only the diagnosis so ja, that keeps us from doing what we need to do because treatment is too expensive.*

The issue extends to inadequate access to therapy, with Participant C noting that learners were not receiving sufficient speech or occupational therapy.

While Participant A, employed in a provincial department, acknowledged resource challenges, she commended ongoing efforts by government services in hospitals and non-profit organizations. This stood in contrast to the perspectives of other participants, exemplified by Participant D who, working in a private practice setting, mentioned the difficulty of relying on government resources:

> *They have to rely on government resources where the waiting lists are crazy.*

The consequences of this delay are evident, as highlighted by Participant D, who stressed the crucial significance of early intervention. Additionally, several participants voiced concern about the inconsistency of treatment, which often ceased after approximately six sessions. Participant D emphasized the adverse outcomes associated with dependence on government resources for ASD interventions.

This issue is compounded by a socioeconomic gap, as noted by Participant E (registered for 20 years; 5 years of experience with ASD cases), who highlighted a lack of resources for those on the lower end of the socioeconomic spectrum. These people might not be able to reach specialized treatment facilities and non-governmental organisations supporting ASD treatment:

> *I would say often the private as I mentioned before is expensive so all of us are falling into the private. I think there probably is a huge gap. Actually, there is a huge gap when supporting people who are on the lower end of the socio-economic status. So, I think those people are not getting the resources that they need.*

The overall sentiment was summarized by Participant G (registered for 10 years; at least 3 years of experience with ASD cases), who pointed to the long waiting lists at public hospitals:

> *Parents basically have to, to go to our public hospitals and then wait months and maybe get an appointment for the child. Once every three months or whatever.*

This collective feedback identifies systemic challenges within the South African context that negatively impact support and intervention for individuals with ASD. This corresponds with observations made in the literature, particularly in a study by Guler et al. (2017), which extensively detailed the challenges faced by South African parents of children with ASD regarding early autism intervention. The study identified various contextual factors such as stigma, cultural influences, language barriers, parenting practices, geographical constraints affecting treatment accessibility, resource limitations, disordered home environments, inadequate living spaces in informal settlements, and financial constraints including low income and the extra costs associated with raising a child with ASD (Guler et al., 2017). These challenges are very similar to those highlighted by the participants, suggesting that they share the same frustrations as parents with the treatment situation in South Africa.

The literature also addresses the limited access to specialized treatment providers and significant delays in diagnosis, with an average waiting period of approximately 18 months for clinical diagnosis of ASD (Makombe et al., 2019; Mayosi & Benatar, 2014). This is attributed to the lack of government support and funding for external therapy, compounded by insufficient coverage by medical aid schemes due to ASD not being recognized as deserving of primary medical benefits (Wetherston et al., 2017; Erasmus et al., 2019). This parallels the financial constraints emphasized by participants that affect access to private therapy and comprehensive care. Moreover, the literature highlights the restricted availability of therapeutic services for ASD within the public health sector, with children receiving low-intensity interventions such as monthly 30-minute sessions of speech or occupational therapy (Guler et al., 2017). Waiting times for these services can vary from 1 to 6 months, as suggested by the participants (Guler et al., 2017).

Subtheme 6: Stigmas and labels associated with ASD

Participants across the study highlighted the pervasive challenges relating to stigmas and labelling experienced by parents and children with ASD. The influence of these challenges permeated various aspects of life, extending from community judgments to cultural beliefs and even impacting public spaces like shopping malls. Notably, adults were identified as key contributors to this phenomenon, making judgments and attaching labels to a greater extent than children do. Cultural beliefs further complicate the matter, with some associating ASD with possession or demonic influence. There was a plea for community awareness and education to combat these misconceptions, with calls for basic teacher training to enhance understanding and support.

Both Participant E and Participant G highlighted the significance of addressing and overcoming these challenges within educational institutions. Participant E (registered for 20 years; 5 years of experience with ASD cases) expressed her frustration with labelling in the private school setting in which she worked, a seemingly educated environment:

> *I think we have had five meetings this year, and still this child has been labelled "naughty", and she is now on anti-depressants and anti-anxiety medication, so you know, I just feel... and it's a private school and it's a well-experienced teacher and it's almost like with this particular child she was not going to see her as other than naughty.*

Participant G (registered for 10 years; at least 3 years of experience with ASD cases) insisted on the necessity for basic teacher training on ASD, citing the ignorance and misconceptions surrounding ASD children:

> *I think if we go back to basics, just in terms of training even our teachers. Yes. You know, just teaching teacher training just incorporate very basic ... Yeah, just so that they can start to, to just kind of read the signs or pick up on it or not ignore it or just think that they are naughty or awkward or you know, whatever.*

Participant C (registered for 7 years; 13 years of experience with hundreds of ASD cases) and Participant H (registered for 19 years; 10 to 14 years of experience with ASD cases) emphasized the cultural dimension of challenges faced by individuals with ASD in South Africa. Participant C highlighted the ongoing issue of cultural and community views, while Participant

H pointed out the cultural aspects of labelling, including perceptions of possession or a connection with the ancestors:

> *…being labelled something culturally, there might be that children on the spectrum might get seen as... possessed or more in touch with the ancestors or whatever.*

Both participants underscored the cultural context as a significant factor influencing attitudes and stigmas regarding ASD. This closely mirrors the findings reported in the literature, especially a study conducted by Guler et al. (2017), which extensively documented the challenges encountered by South African parents of children with ASD. The study cited instances where extended family members, teachers, healthcare professionals, and even outsiders labelled their children as “naughty”, a phenomenon mentioned by Participant E as a challenge that she and a parent of an ASD child had experienced in a school setting. In line with the views expressed by Participant G, the literature notes that these negative labels stem from a lack of understanding about ASD within South African society (Guler et al., 2017). Caregivers complained in the literature that people attributed ASD symptoms to bewitchment or curses, reflecting cultural beliefs prevalent in South Africa. One caregiver recounted how her community rejected her son’s diagnosis, believing that spirits were trapped in his throat and required traditional cutting practices for him to speak (Guler et al., 2017). This cultural dimension of the challenges faced by individuals with ASD in South Africa was cited by both Participant C and Participant H.

Chapter 5: Conclusion and recommendations

This chapter will present the conclusions and implications drawn from the study, discuss its strengths and limitations, and provide recommendations and avenues for future research. Additionally, it will present the concluding remarks on the research findings.

Conclusions and implications of the findings

A very important finding to mention that emerged at the onset of the study was the difficulty in locating educational psychologists with autism spectrum disorder (ASD) experience for the sample, which highlighted the scarcity of professionals in South Africa specializing in ASD cases. This scarcity left many approached educational psychologists feeling ill-prepared to address the complex needs of individuals with ASD, a challenge exacerbated by various systemic and societal factors within South Africa. However, the study also revealed that participants with extensive experience in the field of autism and ASD often relied on insights from international resources and training due to the limited resources available in South Africa. This highlights the need for increased awareness and understanding of ASD through the utilization of international resources and expertise. It also supports suggestions in the literature that there is a need to explore methods to enhance awareness and facilitate access to effective ASD treatment and intervention services in South Africa by leveraging the expertise and resources available internationally.

A significant finding among practitioners in the study pertained to perceptions of insufficient support and awareness within environments where children with ASD interact. A critical theme emerged, emphasizing the lack of ASD awareness among teachers and highlighting the need for grassroots training initiatives. The paramount importance of widespread education, spanning clinics, universities, schools, teachers, nurses, doctors, and community awareness, was strongly emphasized by the practitioners. Overall, there was unanimous advocacy among practitioners for heightened awareness, education, and collaboration. The implication of this collective call to action is crucial for addressing the multifaceted challenges associated with ASD, spanning both families and educational settings. These insights emphasize the necessity for inclusive initiatives aimed at raising awareness and support for ASD and reducing stigma across diverse sectors of society.

Participants emphasized the crucial role of evidence-based interventions in addressing ASD in South Africa. While they acknowledged the importance of such interventions, they also highlighted challenges, particularly the need for specific training. Among the evidence-based interventions commonly highlighted by participants were sustainable and non-dependent approaches, with a focus on visual supports such as social stories. These interventions could be effectively utilized by teachers in classrooms and parents in home settings, extending across various environments if appropriate training is provided. The implication is to create a supportive environment for ASD children, promoting communication, understanding, and effective learning.

One of the pivotal findings of the study revolves around the therapeutic roles of participants in the treatment process. They emphasized the utilization of diverse approaches such as group-based play therapy, person-centred therapy, and other therapeutic methods crucial for meeting the individual needs of both the child and the family. This underscores the presence of educational psychologists who offer support and guidance to parents of children with ASD in South Africa. However, it also unveils a critical gap; despite the existence of educational psychologists providing support, there remains an insufficient number of professionals in this role, as highlighted in South African literature. This literature emphasizes the noteworthy lack of support from healthcare providers, deeming it one of the most significant challenges within the healthcare system. These findings underscore the importance of addressing the shortage of educational psychologists providing support and guidance to parents of ASD children in South Africa, emphasizing the need for increased resources and professional engagement in this crucial area.

Another fundamental finding of the study pertained to the active engagement of many participants in the diagnosis and assessment process of the treatment, aiming to determine the level of support required for children with ASD. Some participants demonstrated awareness of the assessment tools used for diagnosis but pointed out a deficiency in training and the high costs associated with acquiring these assessment tools. Additionally, they emphasized the importance of exposing future educational psychology students to a variety of ASD-specific assessments. This finding underscores the need for addressing training gaps and cost barriers in accessing assessment tools, emphasizing the importance of comprehensive education for future professionals in the field.

A prominent finding among seven participants in the study pertained to the challenges experienced by parents and children with ASD in South Africa. These challenges underscored the scarcity of resources, resulting in prolonged waiting periods of approximately 18 months for clinical diagnosis of ASD. This collective feedback illuminates systemic challenges within the South African context, affecting the comprehensive support and timely intervention available to individuals with ASD. There was widespread acknowledgement among the participants of the necessity for collaboration and support between families of children with ASD. The implication of this finding is to enable the implementation of treatments at home, aiming to ensure greater consistency. This need arises from the fact that many children receive public services after extended waiting periods due to the high volume of ASD cases and limited healthcare professionals.

The absence of medical aid coverage for ASD treatments also aligns with findings from most participants across diverse settings and is consistent with the existing literature. It reflects a broader perception among parents of ASD children of inadequate government support and funding for external therapy beyond school settings. Concerns were also raised by practitioners regarding medical aid rejecting psychologists' diagnoses and deeming them insufficient for certain medications and interventions. This situation creates financial constraints for families of children with ASD, particularly in rural areas. Furthermore, psychologists often find themselves compelled to work within a school setting for a salary that falls below their professional title. These findings raise significant questions about the potential implications of impending changes to South Africa's medical system, such as the National Health Insurance (NHI).

A notable finding from the study was the widespread concern expressed by most practitioners regarding Applied Behaviour Analysis (ABA) in treating ASD. They highlighted potential drawbacks such as inhibiting flexibility, fostering dependency, promoting rote learning without understanding, and lacking contextual relevance. In response to these concerns, many participants preferred adapting cognitive-behavioural approaches to be more context-specific, emphasizing the importance of shifting away from clinical settings to encourage creativity and resourcefulness. This highlights the significance of individuals applying flexible approaches to accommodate the diverse spectrum of children with ASD. It aligns with findings from both international literature and South African literature, emphasizing the need for educational psychologists to get training that allows them to be flexible.

Another key finding from this study is that many practitioners emphasized the crucial role of context in the application of interventions and treatments for children with ASD. The consensus is that treatments must be individualized to be effective. This underscores the crucial need for tailored training programmes to enhance the effectiveness of interventions in diverse contexts. The acknowledgement of the intricate interplay between context and personalized treatment has profound implications for the development and implementation of training initiatives in the field of ASD. The emphasis placed by most participants on the importance of collaborative teamwork in treating children with ASD was also an important finding. They underscored the effectiveness of working together and highlighted the challenges faced when working in isolation. The implication of this emphasizes the need for integrating diverse knowledge areas and developing optimal treatment strategies. This sentiment is echoed in existing literature, which emphasizes that collaborative efforts, coupled with a holistic and individualized approach, are essential for ensuring effective treatment strategies that respond to the unique needs of each child (Robinson et al., 2017; Sadreddini, 2017; Vivanti & Hamilton, 2014). However, it was noted that the multidisciplinary approach to ASD treatment is notably uncommon in African countries, compounded by the absence of policies or guidelines for education, support, assessment, and treatment of ASD (Zeleke et al., 2021). This highlights the urgent need for greater adoption of collaborative approaches and the development of supportive frameworks within African contexts (Aderinto et al., 2023; Pillay et al., 2022a).

Strengths and limitations of the study

Qualitative research inherently involves subjectivity (Rahman, 2016; Tomaszewski et al., 2020), and requires significant time for both data collection and analysis, which can impose physical, emotional, and intellectual demands on researchers (Clark & Sousa, 2018).

Qualitative research provides insight into individual perspectives, experiences, and feelings, encouraging depth in participants’ responses (Rahman, 2016). Therefore, qualitative research was a highly suitable approach to use for this study, as it enabled a deeper understanding of the experiences of the participants in their role as educational psychologists when working with children with ASD (Rahman, 2016).

Finding participants who met the criteria for the research study posed significant challenges. Many of the educational psychologists I contacted revealed limited experience working with ASD children and lacked comprehensive knowledge about ASD. While some specialized in areas like trauma and assessments, others had intermittent experience with ASD children but did not consider themselves specialized in this area, having only occasional interactions rather than regular involvement. Interestingly, the hesitancy of suitable educational psychologists to participate was not due to concerns about the research topic or any aspect of the study itself, nor from a reluctance to share their experiences. Instead, it primarily stemmed from their busy schedules, leaving little room for additional commitments. Engaged in a profession that demands extensive human interaction throughout the day and report compilation after work, these participants struggled to find suitable time slots for interviews amidst their demanding work and personal responsibilities.

Despite encountering challenges in sourcing participants who met the criteria for the research study, the final sample that I obtained consisted of educational psychologists of different ages, from various parts of South Africa, with a range of experience in working with children with ASD, and experience working in diverse professional settings. This allowed for rich and varied information on the topic. The focus in qualitative research is transferability instead of generalizability, as findings cannot be generalized (Elo et al., 2014). One participant in the study brought valuable international experience and exposure to diverse cultural contexts, thereby enriching the study with a multitude of perspectives. Throughout the study, every effort was made to capture rich and detailed descriptions of the participants' experiences, allowing their voices to be represented through using quotes and by being highly reflective as a researcher (Elo et al., 2014; Rahman, 2016).

Despite these efforts, the small size of the sample may mean that not all perspectives on the topic were included and a fully comprehensive picture applicable to everyone may not have been captured. Additionally, the sample shared a relatively homogeneous cultural and ethnic background, which may have restricted the diversity of experiences captured in the study.

It is important to acknowledge that the interviews were conducted in English, despite it not being the first language of two of the participants. The restriction of conducting interviews solely in English may have affected the way these participants interpreted the questions and expressed themselves. However certain aspects of the procedure initially perceived as possible limitations turned out to be strengths in this research study. In response to COVID-19 restrictions and risks, I opted to offer participants the option to choose between an online and in-person platform. Initially, I had concerns about conducting online interviews via the Zoom platform, fearing that it might create a disconnect between the participants and myself due to the lack of face-to-face interaction. However, the online platform ultimately proved advantageous. It not only adhered to safety measures but also significantly reduced travel time for both participants and myself, allowing for more flexible scheduling that may not have been feasible with in-person interviews. Moreover, it facilitated the inclusion of participants from diverse locations across South Africa and alleviated reluctance among participants, as they could now conduct the interview from any location, thereby enriching the data collected. Consequently, I appreciated the flexibility afforded by online platforms and this was an advantage in the study.

Additionally, I harboured concerns that the educational psychologists might be reluctant to answer certain questions or provide detailed information. However, I was pleasantly surprised to find that they were eager to share their insights and willingly elaborated on various topics. In fact, two participants even expressed a desire to schedule a second interview to provide additional information, demonstrating a high level of engagement and willingness to contribute to the study by sharing their knowledge and experiences. Despite initial apprehensions about whether the participants would be forthcoming with their experiences, I was pleased to discover that they felt comfortable enough to share openly, without reservation. This greatly enriched the depth and value of the data collected.

The lack of prior studies dedicated to this research area served as a limitation. The aims and objectives of the research might have been refined further if a robust foundation of South African literature had been available. However, this gap in existing literature also serves as a strength in this study as it addresses a significant gap in the South African-based literature. Through my interactions with professionals in the field, I also acquired insights into their experiences and perspectives. Reflecting on this research, I now realize the significant value it holds for future studies and the improvement of ASD treatment methods to better the condition of ASD children. Additionally, it contributes to the training of educational psychologists, enhancing their understanding of the challenges associated with managing ASD in the South African context.

Recommendations and directions for future research

My belief is that the primary focus in the future should be on creating awareness, starting at the grassroots level and moving upward, engaging individuals interested in researching ASD to unveil hidden facets in the area, including the challenges encountered by educational psychologists and barriers to entering the ASD field. It would be important for future research to look at ways of encouraging those passionate about the topic of ASD to innovate in this domain and subsequently advocating for comprehensive programmes within higher educational institutions for educational psychologists as part of their training is essential. Increased publicity and international exposure can garner more support, attracting globally trained specialists to aid parents, facilities, and communities in contextual approaches, ensuring optimal development for children with ASD and their families (Aderinto et al., 2023). Exploring feasible implementation strategies is imperative, as underscored by literature and participant perspectives, highlighting a profound necessity for action.

The current curriculum for training educational psychologists in South Africa has limitations, as shown in the literature and expressed among participants, leaving professionals without a comprehensive understanding of ASD. Given the global increase in ASD cases, a crucial recommendation is to reassess and incorporate ASD into the psychology curriculum. Participants expressed feelings of isolation and a desire to form a supportive community of educational psychologists working with ASD children in South Africa. Collaboration and a support system among professionals are crucial, considering the strain experienced. This study highlights the need to shift focus from solely parent perspectives to include the challenges faced by educational psychologists and mental health providers in South Africa, addressing issues like medical aid non-payment and financial constraints. Further research in this area is essential to enhance the working environment for educational psychologists in the field of ASD. Considering the unique contextual challenges in South Africa and the extended waiting periods for children with ASD to access interventions through public services, it would be advantageous for future research to focus on equipping parents with skills to implement specific treatments and interventions within the home environment.

Establishing a comprehensive database for individuals working with ASD, including educational psychologists, speech therapists, occupational therapists, schools, doctors and various specialists is also a recommendation that could be pursued. This database would facilitate connections among professionals and improve collaboration. One participant suggested exploring the creation of centralized centres, resembling hypermarkets, offering multidisciplinary services and information. These centres would address the challenge of finding friends for ASD children by providing a space for socialization and fostering empathy between ASD and neurotypical individuals. This emphasizes the importance of building supportive communities for parents, ASD professionals, and individuals with ASD to enhance their sense of understanding and support. Participant E highlighted the existence of a private training centre that offers support and awareness about ASD to families and the community, including information on understanding the sensory needs of ASD individuals, breaking down myths surrounding ASD, awareness of the diverse spectrum, and communication strategies for individuals with ASD. However, accessibility to this centre is limited due to its private nature and associated costs. To broaden access, future research could explore avenues to transform such centres into government-funded entities, ensuring accessibility to a broader population. Given the financial constraints faced by many, investigating affordable alternatives for resources and training of professionals in South Africa is imperative. Research should focus on developing solutions to make resources more accessible. Additionally, research should focus on integrating multidisciplinary team collaboration into ASD training, incorporating working with parents and families to enhance overall effectiveness. Addressing these issues through research can contribute to improving the ASD landscape in South Africa.

One participant in the interview shared experiences where she overlooked signs of ASD, revealing a common perception that ASD is often associated with extreme cases, leading to a lack of recognition in more subtle presentations. Many expressed the need for the psychology curriculum to be updated to educate students on essential information on ASD, including signs, differentiation between neurotypical and neurodivergent individuals, and guidance on when to refer to specialists. Psychoeducation, extended to parents, teachers, and various professionals, emerged as a crucial practice in the study. Incorporating this into future research is essential, given the emphasis from participants and existing literature in South Africa, where training scarcity was highlighted. Additionally, emphasizing that individuals with ASD require unique approaches in education and support should be integrated into training. This perspective, illustrated by Participant E, underscores the importance of understanding and appreciating the diverse needs of individuals with ASD. She likened them to beautiful orchids that require delicate handling and understanding, reinforcing the need for a tailored and informed approach in training and education.

Recommendations for future research should include a re-evaluation of assessment measures employed by educational psychologists in South Africa, as the current methods may be insufficient for diagnosing ASD. Integrating training on specific diagnostic tools tailored for

ASD assessments into the curriculum is essential. Future research should prioritize the integration of experiential learning into the psychology curriculum, as understanding ASD transcends textbook knowledge. Firsthand experiences with ASD through second-hand accounts and direct learning activities could enrich understanding and empathy, underscoring the possible significance of these narratives and activities during training. Researching the impact and effectiveness of these types of interventions is also important and could be valuable for future projects. This could include assessing the impact of including stories from educational psychologists, placement in special needs settings, and specially developed educational videos in the training curriculum. The findings indicated that many educational psychologists working with ASD lack formal training in diverse treatments and interventions for children with ASD. Instead, they often rely on self-directed learning from international resources and their own experiences. While this self-directed learning enhances career development, there is a pressing need for academic institutions to incorporate modules specifically addressing ASD intervention strategies into the psychology curriculum. South African universities could enhance future psychologists' capabilities in treating ASD by integrating modules tailored to the country's unique contextual factors. It is important to consider the need for a balanced approach amidst various training requirements. It might be beneficial to create more targeted training pathways for educational psychologists interested in specializing in ASD following their foundational training, offering an alternative avenue for further specialization.

Creating a platform for experienced educational psychologists, who possess valuable knowledge, to share their best practices and insights in ASD treatments and interventions would be highly beneficial. Online publications and web conferences could highlight interventions particularly suitable in South Africa, such as visual supports. Professional organizations could contribute to advocating for ongoing professional development training courses specifically designed for ASD treatments suited to the South African context. This would foster collaboration among educational psychologists throughout the country.

While this study aimed to explore educational psychologists' views on treating children with ASD in South Africa, future research should expand its scope to include input from diverse professionals working in the field of ASD treatment, such as speech therapists, occupational therapists, neurologists, and others. This inclusive approach will foster greater understanding and inclusivity in treatment practices in South Africa. Researching the effectiveness of different team compositions and the division of tasks in team-based treatment could also be useful.

Conclusion

This study has delved into the perspectives of educational psychologists concerning the treatment of children with autism spectrum disorder (ASD) in South Africa, examining their experiences and the challenges encountered in their work with ASD children. Employing a qualitative research design facilitated the exploration and interpretation of diverse subjective perspectives and experiences among participants. Data collection was carried out through semi-structured interviews, followed by thematic analysis. The integration of insights from participants with existing literature aimed to inform the development and refinement of best practices for ASD intervention.

The diverse sample in this study offered insights into educational psychology practice across various sectors in South Africa, including special needs schools, private practice settings, provincial department outreach teams, and overlapping roles. Additionally, diversity among participants extended to their geographic locations, years of experience, and degrees of involvement with ASD children, shedding light on both similarities and differences in practice across these sectors and enabling a comprehensive understanding of educational psychology practices. The study explored the samples’ experiences of working with ASD cases in South Africa, encompassing the types of treatments or interventions utilized, the factors influencing decision-making in this regard, their involvement in the treatment process, and the significance of interdisciplinary collaboration for treatment efficacy. Participants underscored the challenges of working in isolation, emphasizing the importance of collaboration among professionals for optimal treatment outcomes. Moreover, the study highlighted the myriad challenges faced by parents or caregivers of children with ASD, as well as professionals treating them, attributable to systemic and societal factors in South Africa.

The findings demonstrated the necessity of grassroots training initiatives and widespread education spanning clinics, universities, schools, and healthcare professionals, aligning with literature highlighting the lack of ASD awareness and training in South Africa. This was also strongly advocated by practitioners in the interviews, aligning with literature underscoring the lack of training and awareness about ASD in South Africa. The research aimed to contribute to the training of educational psychologists and gain insight into the feasibility and effectiveness of various treatments and interventions for ASD children in the South African context, given the constraints on treatment resources. Ultimately, the study aspired to provide a foundation for future research endeavours in this critical area.

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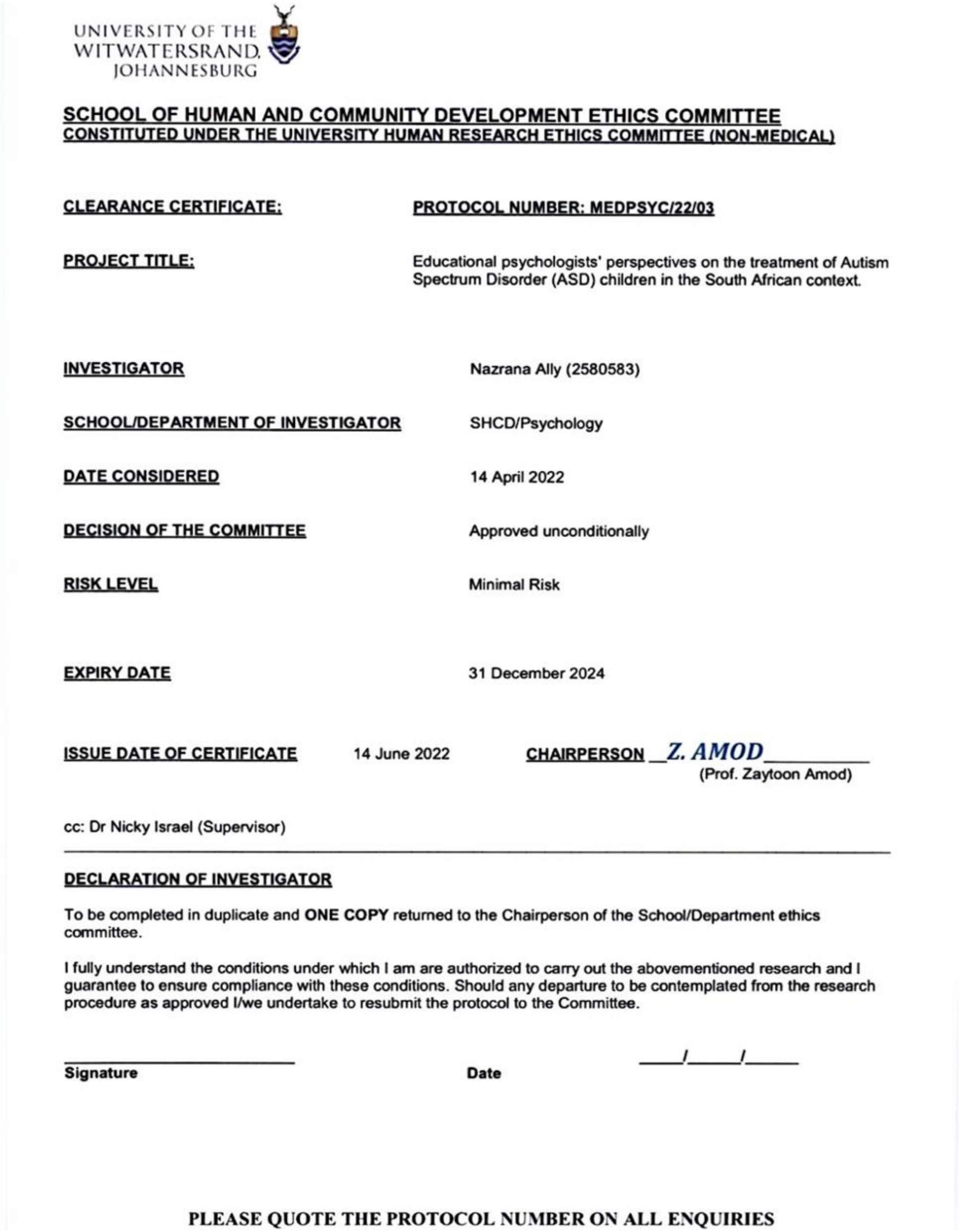
Appendix A: Ethics clearance certificate



UNIVERSITY OF THE
WITWATERSRAND,
JOHANNESBURG

SCHOOL OF HUMAN AND COMMUNITY DEVELOPMENT ETHICS COMMITTEE
CONSTITUTED UNDER THE UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)

CLEARANCE CERTIFICATE:	**PROTOCOL NUMBER: MEDPSYC/22/03**
PROJECT TITLE:	Educational psychologists' perspectives on the treatment of Autism Spectrum Disorder (ASD) children in the South African context.
INVESTIGATOR	Nazrana Ally (2580583)
SCHOOL/DEPARTMENT OF INVESTIGATOR	SHCD/Psychology
DATE CONSIDERED	14 April 2022
DECISION OF THE COMMITTEE	Approved unconditionally
RISK LEVEL	Minimal Risk
EXPIRY DATE	31 December 2024

ISSUE DATE OF CERTIFICATE 14 June 2022 **CHAIRPERSON** Z. AMOD
(Prof. Zaytoon Amod)

cc: Dr Nicky Israel (Supervisor)

DECLARATION OF INVESTIGATOR

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

Signature ______________________ **Date** ____/____/____

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix B: Invitation

Good day

My name is Nazrana Ally, and I am a student registered for a Masters degree in Educational Psychology at the University of the Witwatersrand. As part of the requirements for my degree, I am collecting data for a research project. The purpose of the project is to explore educational psychologists' perspectives on the treatment of Autism spectrum disorder (ASD) children in the South African context.

If you are a registered educational psychologist over the age of 18 with at least three years of experience working with ASD patients and/or in the field of ASD, I would like to invite you to participate in this research project. Participation will involve being interviewed by me either in person or online at a time and place that is convenient. It is expected that the interview will take about an hour and it will be recorded with your consent.

Choosing to participate in the project or not is completely voluntary; you will not be advantaged or disadvantaged in any way whether you decide to participate or not. Your identity will be known to me as the interviewer, but this will be kept strictly confidential and will not be disclosed to anyone else. Any information that could directly identify you as an individual will be removed from the transcript of the interview. A feedback sheet in the form of a one-to-two-page summary of the study and its findings can be available approximately eight months after collection of the data.

More details on the project will be provided in a full participant information sheet that can be sent to you upon request. If you are interested in and would be willing to participate in this study, please contact me using the details given below. Please also feel free to pass this invitation on to anyone else you know who meets the criteria to participate in the study and who may be interested in participating.

Thank you for considering participation in this research project.

Yours sincerely,

Nazrana Ally (researcher): 2580583@students.wits.ac.za

Dr Nicky Israel (supervisor): Nicky.Israel@wits.ac.za

Appendix C: Participant information sheet

[Departmental letterhead to be inserted] Date: [to be inserted]

Good day

My name is Nazrana Ally, and I am a student currently completing my Masters in Educational Psychology at the University of the Witwatersrand. As part of the requirements for my degree, I am conducting research. My research aim is to gain a deeper understanding of educational psychologists' perspectives on the treatment of Autism spectrum disorder (ASD) children in the South African context, including perspectives on types of treatment for ASD, the educational psychologist's role in the treatment of ASD, and difficulties with the treatment of ASD in the South African context. This research will help to provide insight into the treatment of children with ASD in South Africa and it may contribute to training and giving direction for future research. I will be using data obtained from registered educational psychologists who are over the age of 18 years and who have a minimum of three years of experience working with ASD patients and/or in the field of ASD.

If you meet these criteria, I would like to ask you to please consider participating in my study. Participating will require you to take part in an interview with me that will take place at a time that is convenient for you and that will either take place online or in person depending on your preference. It is expected that the interview will take about one hour, and it will be audio-taped or audio-taped and video-taped with your consent. You can also choose to answer or not answer any specific questions asked during the interview or to withdraw from the interview if you would like to.

Participation in the study is completely voluntary, and you will not be advantaged or disadvantaged in any way whether you choose to participate in the interview or not. There are also no direct benefits or foreseeable risks for participating in the study. Your identity will be known to me as the interviewer, but this will be kept strictly confidential and will not be disclosed to anyone else. Any information that could directly identify you as an individual will be removed from the transcript of the interview; and you will not be asked to disclose any confidential details about the treatment of specific patients or individual cases (only your general perceptions and understandings related to the treatment of ASD children in South Africa).

My supervisor and I will be the only ones that have access to the audio-recording of the interview, and this will be kept securely in a location with limited access on a password protected computer. Once analysis of the data and write-up is complete, this original recordings will be destroyed. With your permission, we would like to store a copy of your interview transcript that has all identifying information removed indefinitely (permanently) and to use this for future research studies.

A feedback sheet in the form of a one-to-two-page summary of the study and its findings will be provided to you if requested. Please email my supervisor or myself if you would like to receive this - our contact details appear below. The feedback will be available approximately eight months after collection of the data. Please also contact us if you have any questions. Ethical queries can also be directed to: The University of the Witwatersrand Human Research Ethics Committee (non-medical): 011-717-1408; hrecnon-medical@wits.ac.za

Before beginning the interview, you will be asked to read and sign a consent form that will be provided to you if you are willing to participate in the study. You will also be given a copy of this information sheet to keep.

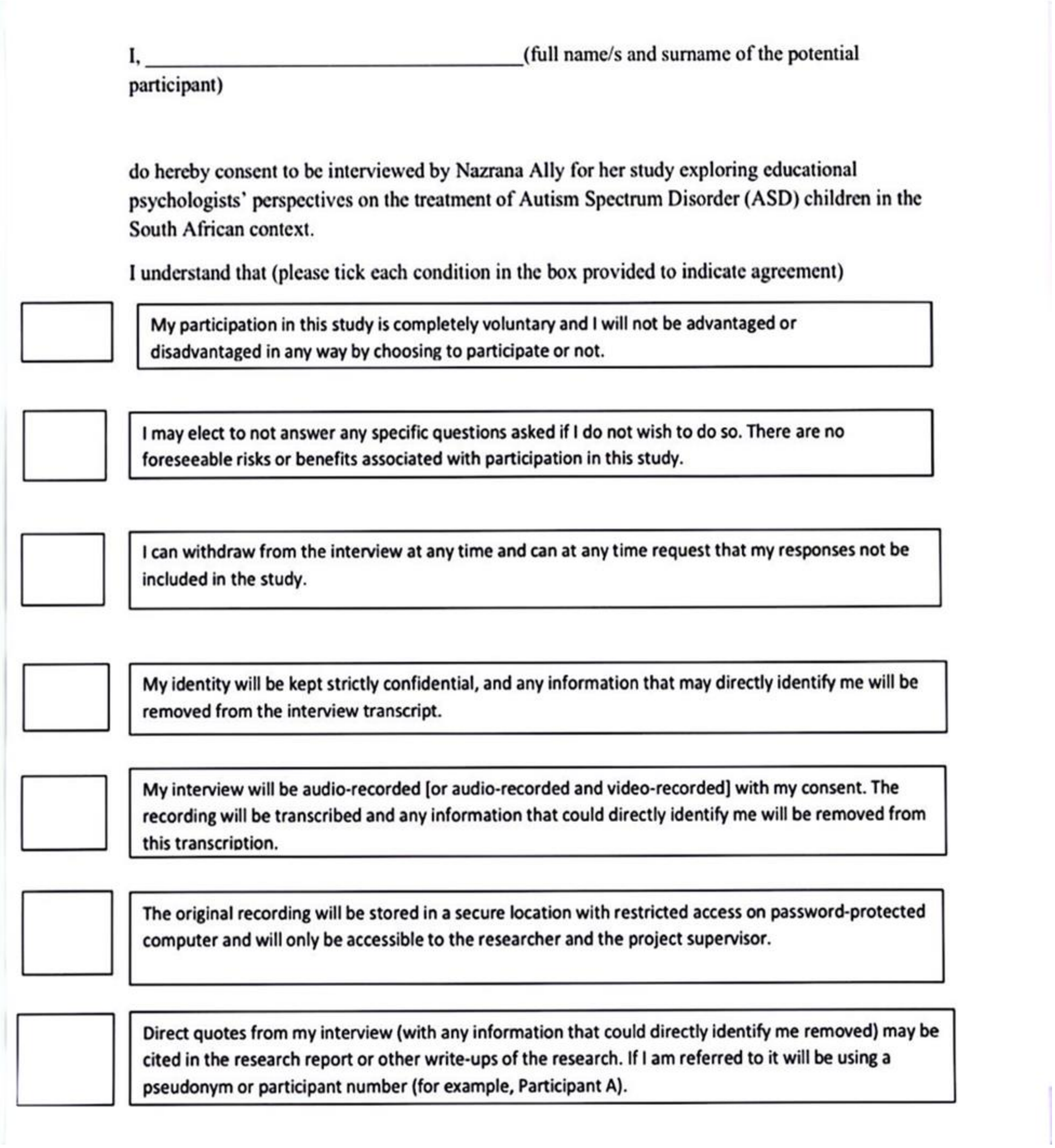
Thank you for taking the time to consider the request to participate in this study.

Yours sincerely,

Nazrana Ally (researcher): 2580583@students.wits.ac.za

Dr Nicky Israel (supervisor): Nicky.Israel@wits.ac.za

Appendix D: Consent Form



I, ____________________________________(full name/s and surname of the potential participant)

do hereby consent to be interviewed by Nazrana Ally for her study exploring educational psychologists' perspectives on the treatment of Autism Spectrum Disorder (ASD) children in the South African context.

I understand that (please tick each condition in the box provided to indicate agreement)

☐ My participation in this study is completely voluntary and I will not be advantaged or disadvantaged in any way by choosing to participate or not.

☐ I may elect to not answer any specific questions asked if I do not wish to do so. There are no foreseeable risks or benefits associated with participation in this study.

☐ I can withdraw from the interview at any time and can at any time request that my responses not be included in the study.

☐ My identity will be kept strictly confidential, and any information that may directly identify me will be removed from the interview transcript.

☐ My interview will be audio-recorded [or audio-recorded and video-recorded] with my consent. The recording will be transcribed and any information that could directly identify me will be removed from this transcription.

☐ The original recording will be stored in a secure location with restricted access on password-protected computer and will only be accessible to the researcher and the project supervisor.

☐ Direct quotes from my interview (with any information that could directly identify me removed) may be cited in the research report or other write-ups of the research. If I am referred to it will be using a pseudonym or participant number (for example, Participant A).

☐ Once analysis of the data and write-up is complete, the [audio-recording/ audio-and-video recording] of the interview will be destroyed. The transcript with all information that could directly identify me removed will be stored permanently and may be used for future research

I do hereby consent to be interviewed for the study	Yes	No

Signed________________________ (signature of participant)

Date: ______________________

Appendix E: Demographic Questionnaire

Please answer the questions below. These are for descriptive and analytic purposes only.

1.) What is your age in years? ____

2.) What is your gender? ____

3.) What is your race? ____

4.) What is/are your home language/s: ____________________________________

5.) For how long have you been a registered educational psychologist? _____________

6.) Please describe the work that you do as an educational psychologist and/or your job role/s (e.g., private practice; primary school counsellor; high school counsellor; university academic; government policy consultant; etc.…)

____

____

7.) For how long have you worked with ASD clients/ been involved in the ASD field?

____

8.) Approximately how many ASD clients have you worked with: _________________

Appendix F: Interview Schedule

Research Topic: Educational psychologists' perspectives on the treatment of Autism Spectrum Disorder (ASD) children in the South African context

Introduction: "Hi, my name is Nazrana Ally. I'm a Masters in Educational Psychology student. Thank you very much for agreeing to meet with me today."

(Ensure the participant's comfort and remind them about confidentiality and voluntary participation; clarify the aims and purpose of the interview; discuss the participant information sheet and have the participant sign the consent form and begin recording).

"Thank you again for agreeing to participate in this research study. This interview will be an open discussion about your perspectives on and experiences with treating ASD children in South Africa. You will not be asked to and do not need to disclose any information about any individual ASD clients you have worked with, and should you mention a specific case, great care will be taken to report this in an anonymous way.

Questions:

1) Can you please tell me a little bit about your experiences of treating children with ASD?

2) Which types of treatment and interventions do you use when treating children with ASD?

3) How did you learn about the different types of treatment and interventions that you use when treating children with ASD?

4) Are there any treatments and interventions that you find especially useful or effective? Please explain why this is the case?

5) Are there any treatments and interventions that you find less useful or effective? Please explain why this is the case?

6) How do you decide which treatments and interventions to use when working with a child with ASD?

7) Have you ever heard of [specific treatment or intervention not mentioned previously by the participant]? Do you think this could be a useful form of treatment or intervention for a child with ASD?

   [Specific treatments or interventions asked about may include evidence-based practice interventions such as visual support, social narratives, reinforcement, prompting, social skills training, etc....; emerging treatments such as augmentative communication, alternative communication, picture exchange communication systems, etc....; developmental approaches; behavioural interventions; and alternative and complementary treatments]

8) Can you please describe the treatment process you follow when you work with a child with ASD? How involved are you in each stage of the process?

9) Can you please explain how you develop the treatment process you follow when you work with a child with ASD?

10) As an educational psychologist, what roles do you take on in the treatment process?

11) Which roles do you feel educational psychologists should take on the in the treatment process for ASD children?

12) Do you ever work as part of a team to treat a child with ASD? If yes, who else is part of the team and what roles do they take on?

13) What roles do you feel different members of an interdisciplinary treatment team should take on in the treatment process for an ASD child?

14) Please describe how you feel about the treatment options available to ASD children and their parents in South Africa?

15) Are there any treatment strategies for ASD that have been recommended to you as an educational psychologist? If so, please explain by whom and why?

16) Are there any treatment strategies for ASD that you would particularly recommend using in South Africa? If so, please explain why?

17) Are there any treatment strategies for ASD that you would not recommend using in South Africa? If so, please explain why?

18) What challenges do you feel ASD children face when seeking or getting treatment in South Africa?

19) What challenges do you feel parents face when seeking or getting treatment for their ASD child in South Africa?

20) Is there anything you think could be done to help parents and ASD children to obtain treatment in South Africa?

21) What challenges do you face as an educational psychologist when treating children with ASD?

22) Is there anything you think could be done to help with these challenges?

23) If you could design a curriculum to train educational psychologist to treat ASD children in South Africa, what would you include in the curriculum and why?

24) Do you have any recommendations for best practice when treating ASD children in South Africa?

25) Thank you so much for participating. Is there anything else you would like to add about treating ASD children in South Africa or that you would like to share with me?

Appendix G: Editor's letter

Epsilon Editing

17 Kew Gardens
21 Park Drive
Gqeberha
6001

dgncornwell@gmail.com

tel. 084-9897977

25 March 2024

TO WHOM IT MAY CONCERN

This serves to confirm that I have edited parts of the Master's thesis by Nazrana Ally, "Educational psychologists' perspectives on the treatment of autism spectrum disorder (ASD) children in the South African context." The front matter, Chapters 1, 2 and 4 and the References have been proofread and edited to my satisfaction for English idiom and correctness of expression. The references and in-text citations have been checked for accuracy and conformity with the protocols of the APA style (7th edition).

G Cornwell

Professor D G N Cornwell
(PhD, Rhodes University)