



**MITIGATING MULTIPLE VULNERABILITIES
EXPERIENCED BY LEARNERS DIAGNOSED WITH AUTISM**

BY

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DECLARATION

I Shireen Devi Hariparsad, declare that:

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As the candidate's supervisors, I agree to this submission.

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Prof Labby Ramrathan

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DEDICATION

This study is dedicated to

My children, Akisha Hariparsad and Atish Krishen Hariparsad

May this work inspire you to persevere in your quest to excel and empower yourselves even
when circumstances challenge you

And to

The memory of my late dad, Mr. Harrie Singh

Who taught me to reach for the stars but keep my feet rooted to the ground

And to

My late sister, Annusha Devi Singh, who was called to higher glory too soon but enriched my
life immeasurably

And finally

To all those Parents with children diagnosed with Autism Spectrum Disorder

May this study guide and assist you in your quest as nothing in life is insurmountable.

‘God gives his toughest battles to his strongest soldiers’

ABSTRACT

Research has shown that autism spectrum disorder (ASD) is a fast-growing condition globally that is more prevalent in boys than girls. It is a neurodevelopmental condition that affects the triad of learning, which is communication, behavior, and social integration. Many educators and parents find it difficult to understand autism as learners diagnosed with autism cannot express themselves as typically developing learners. This has been linked to the abstract nature of the misconceptions and views that parents and educators have on ASD, thus contributing to some of the challenges that learners with ASD experience. Furthermore, educators experience their challenges teaching and understanding learners with ASD in class and many parents find it challenging to deal with their autistic child. The multiple vulnerabilities experienced by learners with ASD ultimately resonated from their intrinsic and extrinsic barriers. Hence, this study focused on mitigating the multiple vulnerabilities experienced by learners diagnosed with autism.

This study adopted qualitative research in which an interpretivist-phenomenological paradigm was adopted. The study was conducted at 6 special needs schools in the Pinetown district of South Africa. Participants were purposively selected. The sample comprised of 3 educators who teach learners with ASD and 3 parents who have children with ASD, from each of the 6 schools. The methodology incorporated semi-structured interviews with educators and parents to obtain their understanding, experience, and challenges with children with ASD. The sample comprised of some schools integrating their learners with ASD in classes and some have confined them in an autistic unit (a class of learners with autism). The study revealed that:

- (i) Educators and parents lack knowledge and understanding of the condition,
- (ii) Some parents lack the confidence in helping their Children with ASD besides experiencing difficulty in emotionally accepting the child's condition, especially when they experienced a difficult help-seeking journey, which began when they first noticed signs of atypical development (most frequently related to delayed speech development, lack of social interaction and poor self-help skills), to the time when the diagnosis was made,
- (iii) There has also been a culturally informed perception from some parents that the condition is attributed as 'satanic', however over time some of them realised that it was

medically inclined and sought the necessary assistance, whilst some parents still feel hopeful that it can be treated through religious beliefs.

- (iv) Educators felt that besides the lack of knowledge, they also do not have the relevant support, guidance, and resources to optimise their teaching potential which compounds their challenges.

Learners diagnosed with autism could not be interviewed due to their communication challenges and this limited this study. The overall findings of the study revealed that learners diagnosed with autism experience personal, social, and educational vulnerabilities. This was a result of many intrinsic and extrinsic challenges. Educators endeavoured to mitigate these challenges by using a variety of adaptive and maladaptive strategies, especially visual cues, namely Picture Exchange Communication (PECS), besides AACs (Augmentative and Alternative Communication), and sign language to facilitate communication among learners with autism. Educators also modified the pedagogic environment and used intervention strategies that worked 'best' for the learner taking into account the diversity of their abilities and needs. The findings of the research also show that teaching learners with ASD requires a collaborative approach among educators, parents, therapists, and school management teams. Bronfenbrenner's ecological theory, the social constructivism theory, and closely associated Feuerstein's theory of mediated learning experience, namely scaffolding and zone of proximal development (ZPD) forms the strong framework of this study as learners in this study, have low cognitive abilities and comorbid of ADHD and intellectual challenges, thus they are largely dependent on support and guidance from various stakeholders to enhance their personal, social and educational (communication) abilities.

Keywords: autism, mitigation, vulnerabilities, learners, inclusive education, interventions

TABLE OF CONTENTS

DECLARATION	i
ACKNOWLEDGEMENTS	ii
DEDICATION	iii
ABSTRACT	iv
ACRONYMS	xv
LIST OF FIGURES	xvi
LIST OF TABLES	xvii
CHAPTER ONE - BACKGROUND AND INTRODUCTION TO THE STUDY	1
1.1 Introduction	1
1.2 Background to the study	2
1.3 The problem statement of the Research	3
1.4 Research questions	4
1.5 Objectives of the study	4
1.6 Purpose of study	4
1.6.1 A personal imperative	4
1.7 Significance of the study	7
1.8 Clarification of terms and concepts central to the study	8
1.8.1 Mitigation	8
1.8.2 Vulnerability	8
1.8.3 Learners	9
1.8.4 Diagnosis	10
1.8.5 Autism Spectrum Disorder (ASD)	11
1.8.6 Inclusive Education	12

1.9 Method of research.....	14
1.9.1 Research design and methodology	14
1.9.2 Research paradigm	14
1.9.3 Qualitative research approach	15
1.9.4 Context and sampling	15
1.9.5 Validity, reliability, and trustworthiness	16
1.9.6 Methods for data collection and analysis	17
1.10 Ethical Considerations.....	19
1.11 Delimitation of the study.....	20
1.12 Chapter Summation.....	20
CHAPTER TWO - LITERATURE REVIEW	22
UNDERSTANDING AUTISM – BIOMEDICAL PERSPECTIVE.....	22
2.1 Introduction	22
2.2 History of Autism Spectrum Disorder	22
2.3 What is Autistic Spectrum Disorder?.....	23
2.4 What are the signs and symptoms of Autism?	25
2.5 Aetiology of Autism.....	26
2.5.1 Screening and Diagnosis of Autism Spectrum Disorder	27
2.5.2 Diagnostic analysis of learners with ASD.....	28
2.5.3 Neurological manifestations of ASD.....	30
2.5.4 Causes of Autism Spectrum disorder	31
2.6 Types of autism	34
2.6.1 Levels on the spectrum	34
2.6.2 Classification of autism	35
2.7 Prevalence of Autism	37

2.8 Treatment of Autism Spectrum Disorder	40
2.8.1 Early intervention	40
2.8.2 Types of treatments	41
2.8.3 Medication therapy	50
2.9 Sociology of Autism.....	51
2.10 Autism and related conditions.....	51
2.10.1 Mental Retardation (MR)	52
2.10.2 Attention Deficit Hyperactivity Disorder (ADHD).....	52
2.10.3 Sensory difficulties	53
2.10.4 Behavioural difficulties	54
2.10.5 Epilepsy	55
2.10.6 Depression and anxiety.....	56
2.11 Conclusion.....	56
CHAPTER THREE - LITERATURE REVIEW - UNDERSTANDING AUTISM - EDUCATIONAL PERSPECTIVE.....	58
3.1 Introduction	58
3.2 The education system for learners diagnosed with autism.....	59
3.2.1 A global perspective of Inclusive Education	59
3.2.2 South African legislation supporting Inclusive Education	61
3.2.3 Inclusive Education in South Africa.....	62
3.2.4 Inclusive Education Policy Document: Education White Paper 6	63
3.2.5 Transitioning from Special Education to Inclusive Education	64
3.2.6 Theories that influence Special Needs Education	67
(a) Humanistic theory	67
(b) Feuerstein’s Mediated Learning Experience (MLE)	68

(c) Interpretive-phenomenological theory	70
3.3 Vulnerabilities experienced by learners diagnosed with autism spectrum disorder	70
3.3.1 Personal vulnerabilities experienced by learners diagnosed with autism.....	71
3.3.2 Social vulnerabilities experienced by learners diagnosed with autism	79
3.3.3 Educational vulnerabilities experienced by learners diagnosed with autism	86
3.4 Teachers experiences and challenges teaching learners diagnosed with autism.....	94
3.4.1 Curriculum.....	94
3.4.2 Classroom organisation and provision of support in the classroom.....	95
3.4.3 Teacher training and development	99
3.4.4 Developing social and communication skills	99
3.5 Challenges faced by parents	101
3.6 Planning of Individual Educational Plans (IEPs).....	103
3.7 Intervention strategies	105
3.7.1 Educators' role.....	105
3.7.2 Speech therapy.....	106
3.7.3 Occupational therapy	106
3.8 Conclusion.....	107
CHAPTER FOUR - THEORETICAL AND CONCEPTUAL FRAMEWORKS	108
4.1 Introduction	108
4.2 Choosing and positioning the study in the Theoretical and Conceptual framework	109
4.2.1 Ecological theories	110
4.2.2 Social constructivism theory	114
4.2.3 Situativity theory	116
4.3. SELECTION OF THESE THEORIES	117
4.4 Impact of Autism Spectrum Disorder	118

4.4.1 Parents and their families	118
4.4.2 Impact of ASD on educators	120
4.4.3 Impact of autism on a learner's life	121
4.5 Theoretical Models of Autism.....	122
4.5.1 Medical Model of disability	122
4.5.2 Social Model of disability.....	123
4.5.3 Bio/psycho/social Model of disability	124
4.6 Conclusion.....	124
CHAPTER FIVE - RESEARCH DESIGN AND METHODOLOGY.....	126
5.1 Introduction	126
5.2 Purpose of this study	126
5.3 Researcher positionality	127
5.4 Research design.....	128
5.4.1 Ontology	129
5.4.2 Epistemology	130
5.4.3 Methodology.....	130
5.5 Research paradigm	131
5.6 Qualitative Research	133
5.7 Research Methodology.....	134
5.7.1 Sampling.....	134
5.7.2 Data generation.....	137
5.8 Research Instruments	139
5.8.1 Semi-structured interviews	139
5.8.2 Observations	141
5.8.3 Field notes.....	142

5.9 Validity and Reliability of the Instruments	143
5.10 Data analysis	144
5.11 Ethical consideration	144
5.12 Trustworthiness	145
5.13 Limitations	146
5.14 Conclusion.....	146
CHAPTER SIX - DATA PRESENTATION – THEME 1	148
6.1 Introduction	148
6.2 Process of Data analysis	149
6.3 Discussion of themes for data presentation.....	151
6.4 Theme 1- Types of Vulnerabilities experienced by learners diagnosed with autism.....	152
6.4.1 Sub-Theme 1: Personal vulnerabilities experienced by learners diagnosed with autism	152
6.4.2 Sub-Theme 2: Social vulnerabilities experienced by learners diagnosed with autism	160
6.4.3 Sub-Theme 3: Educational vulnerabilities experienced by learners diagnosed with autism.....	166
6.5 Realisation of these vulnerabilities?	174
6.6 Gender and vulnerabilities	175
6.7 Race and vulnerabilities	178
6.8 Conclusion.....	179
CHAPTER SEVEN - DATA PRESENTATION – THEME 2	181
7.1 Introduction	181
7.2 Theme 2 – Challenges experienced.....	181
7.2.1 Parents challenges.....	182
7.2.2 Educators’ challenges	187
7.3 Conclusion.....	200

CHAPTER EIGHT - DATA PRESENTATION – THEME 3	202
8.1 Introduction	202
8.2 Mitigation of vulnerabilities.....	202
8.2.1 Intrinsic vulnerabilities.....	203
8.2.2 Extrinsic vulnerabilities.....	223
8.3 Conclusion.....	228
CHAPTER NINE – DISCUSSION OF FINDINGS	229
9.1 Introduction	229
9.2 Purpose of the Study	230
9.3 Analysis of findings	230
9.3.1 Vulnerabilities experienced by learners diagnosed with autism (Personal, Social, Educational).....	231
9.3.2 Challenges experienced by educators and parents	244
9.3.3 Mitigation of vulnerabilities experienced by learners diagnosed with autism	254
9.4 Conclusion.....	259
CHAPTER TEN - SUMMARY OF FINDINGS, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION OF THE STUDY.....	261
10.1 Introduction	261
10.2 Overview of the Research Process	262
10.3 Summary of Findings	263
10.3.1 Participants understanding and knowledge of autism and the impact it has on learners diagnosed with autism	264
10.3.2 Personal vulnerabilities and its impact on learners diagnosed with autism	267
10.3.3 Extrinsic vulnerabilities and its impact on learners diagnosed with autism.....	268
10.3.4 Intervention strategies that mitigate the vulnerabilities experienced by learners diagnosed with autism	271

10.4 Theoretical Analysis of Findings	273
10.5 Implications and recommendations of the study	275
10.5.1 Creation of awareness of Autism Spectrum Disorder	275
10.5.2 Devise a Curriculum for Autism Spectrum Disorder	275
10.5.3 Training of educators.....	276
10.5.4 Resources.....	276
10.5.5 Classrooms for Autism Spectrum Disorder.....	277
10.6 Significance of the Study	277
10.7 CONTRIBUTION TO THE STUDY	278
(i) Providing a variety of intervention strategies that work best for each learner according to their individual needs and demands.....	279
(ii) To provide parents guidance and support to gain a better understanding and knowledge on autism spectrum disorder so that early signs and symptoms can be easily identified and the proper interventions can be instituted early in a child’s life.	279
(iii) To provide educators more insight on ASD to gain better knowledge and understanding in teaching learners diagnosed with autism	279
(iv) To enlighten educational departments to influence and review policies, namely White Paper 6, so that educators can gain better knowledge and training in order to guide, support and assist learners diagnosed with autism.....	280
(v) To enlighten Health and Education departments to create more awareness campaigns to communities and schools in relation to causes, types and interventions for autism spectrum disorder.	280
(vi) Echo sentiments for the developments of a curriculum that would address the academic needs of learners diagnosed with autism	280
10.8 Limitations of the study.....	280
10.9 Recommendations for future research.....	282
10.10 Conclusion of the Study	283

REFERENCES	285
Appendix A – Permission to conduct research – KZN DoE	331
Appendix B – Ethical Clearance.....	333
Appendix C - Permission from Superintendent of Education	334
Appendix D - Informed Consent Letter for Principals	335
Appendix E - Informed Consent Letter for Educators.....	338
Appendix F - Informed Consent Letter for Parents (English)	341
Appendix G - Informed Consent Letter for Parents (Isizulu).....	343
Appendix H - Interview Schedule – Educators.....	346
Appendix I - Interview Schedule - Parents (English & Isizulu).....	347
Appendix J - Observation Schedule.....	348
Appendix K - Language Editors Report	351
Appendix L - Turnitin Report.....	352

ACRONYMS

ASD	Autism Spectrum Disorder
MR	Mental Retardation
ADHD	Attention Deficit Hyperactivity Disorder
SID	Severe Intellectually Disabled
CDC	Centre for Disease Control and Prevention
ABA	Applied Behavior Analysis
TEACHH	Treatment and Education of Autistic and related Communication Handicapped Children
PECS	Picture Exchange Communication System
AAC	Augmentative and Alternative Communication
UNESCO	United Nations Educational, Scientific and Cultural Organisation
DBE	Department of Basic Education
SIAS	Screening, Identification, Assessment and Support
MLE	Mediated Learning Experience
IEP	Individual Educational Plan
ZPD	Zone of Proximal Development
SMT	Senior Management Team
CAPS	Curriculum Assessment Policy Statement
AHDN	Additional Health and Developmental Needs

LIST OF FIGURES

Figure 2.1	Triad of Impairments for ASD	27
Figure 2.2	Human Brain	33
Figure 2.3	Autism Spectrum - The Rainbow Effect	37
Figure 2.4	Spectrum of Disorders	38
Figure 2.5	Prevalence of Autism	41
Figure 3.1	Legislative Process - White Paper 6	64
Figure 3.2	Feuerstein's theory of Learning and Development	92
Figure 3.3	Approach to supporting the spectrum of learning needs for students with AHDN	98
Figure 4.1	Bronfenbrenner's Bioecological Model of Human Development	111
Figure 4.2	Model of Vygotsky's zone of proximal development	120
Figure 5.1	Research dimensions	134
Figure 6.3	Thematic Analysis	155

LIST OF TABLES

Table 3.1.	Sensory Needs and Solutions	72
Table 5.1.	Profile of Interviewees - Educators	137
Table 5.2.	Profile of Interviewees - Parents	138
Table 9.1	Intervention Strategies	262

CHAPTER ONE - BACKGROUND AND INTRODUCTION TO THE STUDY

1.1 INTRODUCTION

Autism Spectrum Disorder (ASD) is a fast-growing condition globally that affects learners from birth. It is a life-long condition, which, unfortunately, is on the rise each year and occurs in all racial, ethnic, and socioeconomic groups (Villakey, 2018). There are no known causes and cures for this condition (National Autistic Society, 2018). Thus, learners diagnosed with autism experience multiple vulnerabilities which affect their daily lives, such as communication, behavior, and socialisation. These learners are unlike typically growing children who go through the various stages of life ‘normally,’ starting from their milestones to the way they view the world. Learners with autism also experience challenges with their toileting, eating, self-help skills, and transitioning from activity to activity and from environment to environment. Parents of autistic children experience difficulty in understanding their condition and coping with their demands. Educators also experience difficulty in understanding learners diagnosed with autism, their sensory needs, socialisation, learning, and development.

Learners with autism are unique individuals with each one having its own set of abilities and needs. However, they cannot express those needs like other typically growing learners. Furthermore, learners with ASD prefer to be aloof due to their social and communication deficits, thus they tend to get bullied, victimised, and stigmatised by their peers, families, and community. This study therefore aims to explore the vulnerabilities experience by learners with autism. Although there are no known causes and cures for autism, the study aims to establish some interventions and treatment strategies that can mitigate the multiple vulnerabilities experienced by learners diagnosed with autism. This chapter will present the background, purpose, and significance of the study. It will also clarify key concepts for a deeper understanding of this phenomenon to address my research questions.

1.2 BACKGROUND TO THE STUDY

The 1994 elections brought about changes such as democratisation, equality, non-discrimination, equity, and redress, as well as the Reconstruction and Development Programme (Constitution of the Republic of South Africa, 1996 and Education White Paper 6, 2001). The new education system stipulates that there should be no unfair discrimination against any person or anything on the following grounds; age, disability, gender ethnicity, language, class, HIV, or other infectious diseases. All learners, regardless of their impairments, should be accommodated in the education system (White Paper 6).

The South African Schools Act No. 84 of 1996 categorically states that no learner of school-going age should be denied education irrespective of their disability. This implies that based on the rights of all learners and their parents, no learner must be turned away from any school if it is at all possible to accommodate the learner. This further implies that the inclusion of all learners, including learners with ASD, will assist in eradicating the labeling of learners with impairments. Learners with impairments will therefore be able to live with their parents, sisters, brothers, or relatives and attend a schooling system (Department of Education, 2001a, p. 3). Thus, this study aims to highlight the need for all learners with ASD to be placed in appropriate educational institutions so that they could acquire quality education, intervention, and support that will enable them to engage successfully in the core curriculum.

Furthermore, schools and classrooms should work on the premise that learners with disabilities are as fundamentally competent as learners without disabilities (White Paper 6). Inclusive education aims to enable learners with impairments to maximise their opportunities, potential, and personal fulfillment in their family environment, in school, and the wider community, despite their social, communication, and behavioral issues (Loreman, 2017).

1.3 THE PROBLEM STATEMENT OF THE RESEARCH

Children on the autism spectrum, including their parents and caregivers face many issues and challenges on a daily basis (Autism Speaks, 2016). However, it is important to remember that each child with autism is a unique individual with unique needs and abilities, hence, he or she will experience those issues in a unique way (Research Autism, 2018). Children with autism learn differently from other learners and need more attention and a distinctive teaching approach (Jackson, 2015). These children could, and in many cases do suffer due to ineffective teaching methods. Hence, educators have a responsibility to ensure that the quality of education their learners receive is tailored to their learning capabilities.

As an educator in the Special needs field, I have realised that there are concerns around the inclusion of learners with ASD at schools which is in direct contradiction to Education White Paper 6 – Building an Inclusive Education and Training system (2001). The White Paper aims to accommodate learners who experience or have experienced barriers to learning and development or who have dropped out of school because of the inability of the education and training system to accommodate their learning needs and abilities, and autism falls within this category. However, I have observed that some learners with ASD are turned away from admission at schools, especially those on the lower spectrum of autism. In addition to parents having difficulty accepting their ASD child, educators lack knowledge and understanding of ASD.

Furthermore, some parents who are successful in gaining admission for their children at the special needs schools have high expectations from educators without getting involved in their child's school programme, notwithstanding that learners with ASD experience many intrinsic and extrinsic vulnerabilities. Amongst those challenges are making sense and meaning of their world and communicating their needs and abilities to educators, parents, peers, and the broader community.

1.4 RESEARCH QUESTIONS

The problem that will be investigated in this study pertains to the multiple vulnerabilities experienced by learners diagnosed with autism and how such vulnerabilities can be mitigated:

- What are the vulnerabilities experienced by learners diagnosed with autism?
- What challenges do educators and parents experience in the teaching and learning of learners diagnosed with autism?
- How do educators and parents mitigate these vulnerabilities?

1.5 OBJECTIVES OF THE STUDY

- i. To determine the different vulnerabilities experienced by learners diagnosed with autism.
- ii. To determine the impact of such vulnerabilities on the autistic learners' academic performance.
- iii. To find ways in which these vulnerabilities can be mitigated against learners diagnosed with autism.
- iv. To explore the nature and form of the Department of Education's support to ASD learners.

1.6 PURPOSE OF STUDY

1.6.1 A personal imperative

An impairment is limitation in performing an activity, thus it inhibits an individual in executing a task or action (World Health Organisation, 2018). The impairments (sometimes known as differences or challenges) that affect learners with autism are evident in their social interactions and communication, thus limiting them in maintaining their daily conversations like any other individual. Typing up closely is a 'disorder,' which is a physical

or mental condition that is not normal, thus hindering them to perform their daily activities which can also be called 'disability.' This ostensibly relates to my observation of how people misinterpret ASD as a disability. My research takes the antithesis of the very perspective described in this preamble, in that I am not telling the story of disabled people, as an outsider but by recording the living and personally transforming story of working with learners with intellectual impairments.

Parents go in search feverishly for admission at schools for their Children with ASD, only to be turned away which is in direct contradiction of White Paper 6. This paper emphasises that all learners of school-going age must be placed in an educational environment irrespective of their age, race, gender, and disability. I hope to disentangle schooling choices best suited for children diagnosed with autism. This will be done by examining my observation of accessing schooling spaces for children with ASD with the relevant international and national frameworks and policy guidelines for inclusive education. These frameworks include the Salamanca Statement and Framework for Action on Special Needs, (1994) to which South Africa is a signatory. Other frameworks include the UN Convention on the Rights of Persons with Disabilities, (2006), in which Article 19 states that "persons with disabilities can access an inclusive quality education, namely primary and secondary education on an 'equal basis,' and the South African School's Act of 1996.

I have been an educator in a public school for the disabled for twenty-seven years and have experience in a variety of roles - as a teacher, management personnel, and a lay counselor. Through the years of teaching, I experienced first-hand how easily people label and lower their expectation of the success of children with visible barriers to learning (VBTL), more especially to children with ASD. I found it difficult to bear some of the terms used by people in general when describing learners who experienced challenges in learning, reading, listening, writing, or counting. These experiences challenged me to question how I taught, what I taught, and how learners learned. The more I engaged with the parents of children with ASD, the more I realised the challenge for parents was to ascertain how much meaningful participation their child received from the classroom context, curriculum, peers,

educators, extra and co-curricular programmes offered. Learning to differentiate my strategies in the classroom to enable all learners to participate meaningfully was sometimes hindered by lack of resources, large classes (number of learners), small classrooms, and limited floor space. I persevered nonetheless in the hope that respecting and valuing my learners as people is important and helping each achieve their optimum will equip them with skills to cope in the real world.

I further observed that educators marginalise and reprimand learners with ASD. I went on to have discussions with some educators on the understanding of ASD, which proved a lack of understanding and further lack of support from the districts in educating and supporting such educators. Through my engagements I realised that the District Based Support Teams (DBST) were not providing the School-Based Support Teams (SBST) the necessary support, guidance, and assistance with the programming and insight in understanding learners with ASD. The National Strategy on Screening Identification, Assessment, and Support (SIAS) is a strategy that is underpinned by Education White Paper 6 - Special Needs Education; Building an Inclusive Education and Training System, a policy that is aimed to respond to the needs of all learners in our country, especially learners that are experiencing barriers to learning and establish support structures and guidelines for schools, educators, parents, and districts. Notwithstanding this, I also observed that children on the autism spectrum have trouble understanding the core curriculum and communicating their needs to educators and peers. They have difficulty understanding classroom directions and instructions, along with subtle vocal and facial cues of educators (Synapse, 2016). This became evident when they would scream for no apparent reason. As an educator directly working with learners diagnosed with autism, my curiosity grew and I endeavoured to find out through my journey of this research, how and what causes these unusual behavior issues, besides the challenges that affect their learning and development.

1.7 SIGNIFICANCE OF THE STUDY

Significance implies the ‘importance’ of and in this study, we refer to how we can mitigate the vulnerabilities experienced by learners diagnosed with autism. Thus, the core purpose of this study is to provide the necessary support and guidance to educators and parents to address that purpose. Consequently, ASD are a heterogeneous set of neurodevelopmental disorders defined by verbal and non-verbal communication, restricted and social interactions, and stereotyped patterns of behavior (Jackson, 2015). The prevalence of ASD is rising daily and the diagnostic criteria and clinical perspectives on the epidemiology of ASD are continuing to evolve (Ziats & Rennert, 2016). Thus, parents and educators must keep abreast of information on ASD, however, through my interactions and engagements with educators and parents I have found that educators are in desperate need of knowledge and insight on ASD which includes a curriculum, classroom management, supervision of learners with ASD and parents require insight, knowledge, and guidance on ASD so that they would be better equipped to handle their ASD child. This study also aims to provide the biomedical and educational perspectives which provides a background to the condition, thus providing a better understanding of the condition thereof.

By having a better understanding of the condition, the researcher strongly believes that parents and educators will realise that they have an essential role to play in the education and welfare of learners with autism, especially those learners with ASD on the lower spectrum of the disorder as they require high levels of support and guidance on their daily living. Many of the learners with ASD are non-verbal or echolalic and their greatest challenge is their communication thus, they cannot express their needs. The study will unfold by formulating some guidelines and intervention strategies that will guide and assist participants in supporting and guiding learners by utilising a variety of intervention strategies and therapies to mitigate their challenges.

1.8 CLARIFICATION OF TERMS AND CONCEPTS CENTRAL TO THE STUDY

To ensure a clear understanding of the study, it is necessary to explain some of the key concepts:

1.8.1 Mitigation

Mitigation is to reduce an undesirable action, lessening the force or intensity of something unpleasant (Landolt, Cloitre & Schnyder, 2017). It is the act of making a condition or circumstance less severe to ensure their safety as ‘they’ may be more vulnerable to developing chronic non-communicable conditions because of behavioral risk factors, namely physical inactivity and poor dietary preferences, however they are at greater risk of violence, injury, and abuse (World Health Organization, 2019). Consequently, learners with ASD are susceptible to such vulnerabilities means that educators and parents, including their family members, have a huge responsibility to ensure the safety and protection of learners diagnosed with autism. Considering learners with ASD experience a host of vulnerabilities (FEMA, 2018), including their intrinsic and extrinsic vulnerabilities, this study, therefore, aims to mitigate these vulnerabilities experienced by learners with ASD. This will contribute to learners with ASD living improved lives, whereby everyone understands them, thus mitigating victimisation and stigmatisation.

1.8.2 Vulnerability

According to Merriam-Webster Dictionary (2019) vulnerability is when someone is physically or emotionally attacked or abused by another person. Vulnerability is also a hindrance or obstacle to a person’s life experience (Griffiths, et al., 2019). In this context it alludes to learners with autism who experience deficits in social communication and behavior. Firstly, learners with ASD may significantly limit the capacity of an individual to conduct daily activities and participate in society due to their educational and social attainment (Jackson, 2015). Thus, some individuals have severe disabilities, namely low

cognitive abilities, and physical challenges. They may also require life-long care and support which means parents need to employ caregivers. In some cases, these caregivers may not have the patience, tolerance, and understanding to take care of learners with ASD which can result in abuse and neglect (Weiss, 2018). Some of them are non-verbal, thus some cases of abuse go unreported (World Health Organization, 2019). Through my engagement with parents and educators, I also realised that these problems also occur at schools whereby class assistants get frustrated with learners with ASD and hit them. This only comes to light when learners go home, and parents see the marks on a child's body and question it.

Secondly, learners with ASD invariably have difficulties in social engagement and the acquisition of communicative skills (Jones, 2019). Hence, how these difficulties are manifested vary widely from person to person. Many individuals with autism do not develop functional language skills and show deficiencies in non-verbal communication which impacts their social interaction and behavior thus becoming challenging for learners with autism to function in their daily living (Ellis, 2018). learners with ASD experience a plethora of vulnerabilities and as such, they often get stigmatized and bullied (Weiss, 2018). This study aims to mitigate such vulnerabilities by guiding, assisting, and supporting parents and educators so that they can acquire a better understanding of ASD to manage learners with ASD.

1.8.3 Learners

The South African Schools act 84 of 1996, defines learners as anyone who receives education or is obliged to receive an education. A learner is “a person who is finding out about a subject...” who is “learning a subject or skill” and therefore is “being educated” (Collins, 2012). For the purpose of this research, the learners referred to are between the ages of 5 and 18, and are on the autistic spectrum disorder, and are placed in special needs schools. These learners demonstrate a heterogeneous neurodevelopmental disorder which is characterised by their social interaction, communication, and behavior that affects their

daily lives. Some schools operate on the premise of placing learners with ASD in classes that only cater to learners with ASD and some schools integrate their learners with ASD in the different classes. This will be discussed further in the data analysis chapter.

1.8.4 Diagnosis

The Medical Institute of SA (2009) defines ‘diagnosis’ as the identification of the cause of the patient’s illness or discomfort. The process of determining the unique cause of a patient’s illness can only be done by a doctor. In this study, learners with ASD were diagnosed by pediatric neurologists, pediatricians, general practitioners’ whilst some have ASD traits but have been misdiagnosed by health professionals. According to the Centre for Disease Control and Prevention (2018), diagnosing autism spectrum disorder (ASD) can be difficult, as there is no medical test, namely a blood test, to diagnose the disorders. The child’s behavior and development is observed by a doctor, who then makes a diagnosis. ASD detection vary, namely some can be at 18 months or younger. Whilst some are detected by age 2, when the characteristics become more pronounced, hence a diagnosis by an experienced professional becomes more accurate and reliable. However, many children do not receive a final diagnosis until much older. This delay means that children diagnosed with autism might not get the help they need therefore parents must observe their child’s milestones closely and any unusual behavior so that a proper diagnosis can be made at an early stage. Furthermore, autism is not a single disorder, but a spectrum of closely related disorders with a shared core of symptoms (Smith, et al., 2019). Every individual on the autism spectrum has problems to some degree with social interaction, empathy, communication, and flexible behavior (World Health Organization, 2019). But the level of disability and the combination of symptoms varies tremendously from person to person, thus two learners with the same diagnosis may present very differently when it comes to their behaviors and abilities (Autism Speaks, 2018).

1.8.5 Autism Spectrum Disorder (ASD)

ASD is defined as a serious neurodevelopmental disorder that impairs a child's ability to communicate and interact with others (Jackson, 2015). Autism, or ASD, refers to a broad range of conditions characterised by challenges with social skills, repetitive behaviors, speech, and non-verbal communication (Autism Speaks, 2018). There are several factors that influence the development of autism, and it is often accompanied by sensory sensitivities and medical issues such as gastrointestinal (GI) disorders, seizures, or sleep disorders, as well as mental health challenges such as anxiety, depression, and attention issues (Saggers, 2016).

Consequently, autism is a severe disorder of the brain function that is marked by problems with social contact, intelligence, and language, including ritualistic or compulsive behavior and bizarre responses to the environment (Mayo Clinic, 2018). The term 'spectrum' in ASD refers to the wide range of symptoms severity. Although the term 'Asperger's syndrome' is no longer in the DSM, some people still use the term as it is thought to be at the mild end of ASD. While there is no cure for autism spectrum disorder, intensive early interventions and therapy can make a significant difference in the lives of many learners (Mayo Clinic, 2014, p. 6). In this research, 'autism' refers to a neurological disorder characterised by deficits in social interaction, communication, restricted imagination, and behavior.

(a) Theory of Mind

According to Dajose (2019), the theory of mind refers to the ability to understand the desires, intentions, and beliefs of others, and is a skill that develops in the early ages in typically developing children, which is impaired in autistic children. Thus, this leads to misreading or failure to read emotions, intentions, or cues from others (Rastall, 2016).

(b) Echolalia

Many children with autism spectrum disorder (ASD) use echolalia, which means they repeat others' words or sentences (Rudy, 2020). He further stated that they might repeat the

words of familiar people, namely parents and educators, or they might repeat sentences from their favorite video. According to Lowry (2016), some children tend to repeat words right after they hear them, this is known as immediate echolalia whilst some may repeat words at a later time, it's known as delayed echolalia. Hence delayed echolalia may seem very unusual because these sentences are used out of context, namely, a child might enjoy a song his/her educator sang at morning ring, and then later ask to sing it at home by saying "It's morning ring" instead of saying the name of the song.

(c) Stimming

The word "stimming" refers to self-stimulating behaviors, usually involving repetitive movements or sounds (Rudy, 2019). According to Legg (2018), this self-stimulatory behavior or stimming may also be called stereotypy which is common in autistic people and those with developmental disabilities or challenges. For example, hand flapping, fidgeting with objects, or body rocking, which some scientists attributed to a way to calm their anxiety, generate or maintain awareness of their bodies, focus their concentration, or deal with overwhelming sensations or emotions (Deweerd, 2020).

(d) Social reciprocity

According to Autism Society (2020), social reciprocity is the back-and-forth flow of social interaction and the term reciprocity refers to how the behavior of one person influences and is influenced by the behavior of another person and vice versa. The skills involved in social reciprocity in very young children begin with showing interest in interacting with others and exchanging smiles (Saggers, 2016).

1.8.6 Inclusive Education

Inclusive education was derived from the word 'inclusion' which means 'another way to educate,' which started in special education inclusion in the early 1990s for children with developmental disorders (Hornby, 2017). Inclusive education is the restructuring of special education to permit all or most learners with special educational needs to be integrated into

mainstream classes through reorganization and instructional innovations which includes co-operative consultation and team teaching (White Paper 6). All learners have the right to access education that values, respects, and accommodates diversity and learners' needs within an integrated system of education (Department of Basic Education, 2001). This policy on inclusive education stipulates that all learners, irrespective of race, gender, class, religion, disability, culture, or sexual preference have a right of access to a learning environment in a single system of education that values, respects and accommodates diversity (Department of Basic Education, 2001b). The ultimate purpose or aim of inclusive education is to optimize learners' potential, and personal fulfillment in their family environment, in school, and the wider community (Department of Basic Education, 2005b).

According to the Department of Basic Education (2001), Inclusion in education refers to a model wherein learners with special needs spend most of their time with non-special needs learners, namely general education. It is therefore guided by an individualized education program (IEP) and is built on the notion that it is more effective for learners with special needs (LSEN) to be exposed to mixed experiences so that they could become more successful in social interactions leading to further success in life. Although inclusion rejects special schools and classes, it still makes provision for the use of special schools or classrooms to separate learners with profound disabilities from learners without disabilities. Schools with inclusive classrooms do not believe in separate classrooms, hence they have to learn to adapt to learners while being less focused on by educators due to a higher learner to teacher ratio (Department of Basic Education, 2005b).

For the purpose of this study, the researcher refers to 'inclusion' within the context of learners with ASD being placed in a classroom that only caters for learners with ASD with their teaching methodologies and programs specific to the autistic learners within a special needs school and 'integration' refers to learners with ASD being placed in different classrooms within the special needs schools. Both approaches will entail using individual education programs (IEPs) to suit the diverse needs and abilities of learners with ASD. It is about meeting the needs of all learners to ensure they get a quality education and have the opportunity to reach their maximum potential (Saggers, 2016).

1.9 METHOD OF RESEARCH

1.9.1 Research design and methodology

Research design is a logical sequence that relates empirical data to a study's initial research questions and conclusion (Roller, 2015). The research being investigated aims to achieve an in-depth knowledge and understanding of learners with autism and mitigate the multiple vulnerabilities of learners diagnosed with autism. The design, therefore, includes the epistemological positioning taken in the research process, the research approach, research methodology, and the data production process. In this section, I elaborate on the methodological choices that I have taken and argue for its appropriateness of these choices.

1.9.2 Research paradigm

This study is located within an interpretivist-phenomenological paradigm. Interpretivism is a process of research that focuses on the subjective meanings of the participants as they experience their lifeworld, and the research intends to interpret and understand this worldview (Vosloo, 2017). However, Bush, et al. (2019) contributed to this understanding of interpretivist research by arguing that it is a perspective that privileges subjective meanings and understanding from own experiences.

According to Neubauer, et al. (2019), phenomenological paradigm is a well-founded qualitative methodology that focuses on the commonality of a lived experience within a particular group. Hence this study, therefore, explores the subjective understanding and experience of educators of special needs education and parents that have children with autism, in their interactions with autistic learners in terms of identifying their vulnerabilities and the impact of such vulnerabilities on the learners' education and well-being with a view of mitigating such vulnerabilities.

1.9.3 Qualitative research approach

Rashid et al. (2019) emphasise that qualitative research approach and methodology enables researchers to conduct an in-depth exploration of intricate phenomena within some specific context. The research being investigated aims to achieve an in-depth knowledge and understanding of learners with autism and create teaching strategies so that educators can be better equipped to teach learners with autism, thus this will help them in overcoming some of their challenges as educators. Research in this field involves the experiences, opinions and feelings of individuals producing subjective data, relative to the ideology of the interpretive-phenomenological paradigm.

1.9.4 Context and sampling

Sampling is the process of selecting units, namely people, organisations from a population of interest so that by studying the sample we may fairly generalise our results back to the population from which they were chosen (Trochim, 2020). The context in which this study will take place is specifically to special needs schools in the Pinetown district that caters for learners with autism.

I have selected the purposive sampling method, which is frequently used in qualitative studies to answer the research questions based on a specific purpose (Crossman, 2019). The participants in this study include 3 educators from 6 special needs schools from the Pinetown district and 3 parents of the respective learners chosen by the educators that are selected from those schools. The educators will be selected purposively using the following criteria: (i) They must be registered with the South African Council of Educators; (ii) They must be a qualified educator; (iii) They must be teaching learners in special needs schools for more than 3 years and with experience in working with learners diagnosed with autism. The parent participants will be purposively selected according to the following criteria: (i) they have a child who is autistic and is attending one of the researched schools; (ii) their

child has been in the school for at least two years; (iii) that the parents have had prior engagements with the educators of his/her child on matters related to their vulnerabilities.

The educator participants will be recruited through a process that includes having a meeting with all potential educators who meet the above-mentioned criteria, in the selected school at a time convenient with the school principal and educators. Thus, this meeting the purpose, intent, expectation, and rights of the participants for the study, will be outlined and discussed with the educators. Volunteers from this group of educators will be invited to participate in the research process. Should the required number of educators not be achieved, then the personal approach to the targeted educators will be made to encourage them to participate in the research process.

The recruitment of the parent participants will follow a slightly different process. The parents who meet the above-mentioned criteria will be identified through the administrative section of the targeted schools. From this list of potential parent participants, each parent starting from the top of the list will be personally approached, the research intent, process, and participant's rights will be discussed with them and a volunteer request will be made. Once the required number of parent participants has been reached, no further recruitment will take place. Selection bias will be avoided through a process of review in terms of gender and race profiles of all participants. The recruitment and selection of the educator and parent participants will cease once diversity in terms of race and gender has been achieved.

1.9.5 Validity, reliability, and trustworthiness

The attitude and confidence that will be investigated in this study are all latent constructs and, as a result, it will not be possible to measure them directly. However, it is possible to incorporate checks for validity and reliability in the research design.

According to Leung (2015), validity in qualitative research means “appropriateness” of the data, processes and tools. The research question is valid for the desired outcome, based on

the choice of methodology that is appropriate for answering the research question. Furthermore, the design is valid for the methodology when the sampling and data analysis is appropriate, and finally, the results and conclusions are valid for the sample and context. In assessing the validity of qualitative research, the challenge can start from the ontology and epistemology of the issue being studied, e.g. The concept of the “individual” is seen differently between humanistic and positive psychologists due to differing philosophical perspectives.

Reliability is also the exact replicability of the processes and the results (Leung, 2015). In qualitative research with diverse paradigms, such a definition of reliability is challenging and epistemologically counter-intuitive. Hence, the essence of reliability for qualitative research lies with consistency. A margin of variability for results is tolerated in qualitative research provided the methodology and epistemological logistics consistently yield data that are ontologically similar but may differ in richness and ambiance within similar dimensions.

1.9.6 Methods for data collection and analysis

A qualitative approach will be used to analyse and collect data through semi-structured interviews. I will seek permission from the Senior Education Manager/s from the respective districts to conduct research at special needs schools. I will interview educators using a semi-structured interview (Appendix H, 314) with purposively selected parents of autistic learners in each of the selected schools upon permission being granted. Educators and parents of learners diagnosed with autism will be held at a time and venue convenient with the participants. The interviews will be once off, the duration of which will be a maximum of one hour.

(i) Semi-structured Interviews with educators

The interview represents a systemic way of talking and listening to people to collect data used for research purposes (Rowney & Watts, 2018). The study at hand will employ a semi-

structured style of interviewing educators specifically working with learners diagnosed with autism to engage them in the experiences of teaching autistic learners, more specifically that which relates to the learners' vulnerabilities.

Semi-structured interviews are non-standardised and are commonly used in qualitative analysis (Rowney & Watts, 2018). It is often preceded by observation, informal and unstructured interviewing on the topic of interest to create relevant semi-structured questions (Keller, 2019). Consequently, the interviewer and participants engage in a formal interview using an interview schedule (Appendix H & I) that I developed. The interview schedule contains a list of questions and topics that are addressed during the conversation in a particular order (Keller, 2019). Semi-structured interviews inculcate an atmosphere for respondents to feel free in expressing their views and perspectives in their terms that can provide reliable, comparable qualitative data.

(ii) Semi-structured Interviews with parents

One-on-one interviews with parents will take place at a time and place most convenient with them. The interviews will be guided by a set of leading questions. Probing questions will be asked of parents to gain deep insights and complete information on their child's vulnerabilities and the challenges that they experience with these vulnerabilities. The interviews will be of a maximum duration of one hour.

(iii) Observation

Observation, according to Dudovskiy (2019), is a means of collecting data through observing which is participatory in nature and requires the researcher to immerse herself in the setting where her respondents are while taking notes and/or recording. Besides, this will be unstructured observation which is open and free thus with no variables or objectives (Dudovskiy, 2019). Observation also gives a researcher first-hand exposure to the participants' behavior, and emotions (Barett, et al., 2019).

(iv) Data Production

The participants will be asked for preferable methods to be used and of convenient times for the one-on-one semi-structured interviews so that there will be no inconvenience to their teaching and learning time. Participates will engage in the interviews voluntarily and will attain information relevant to this study.

(v) Data Analysis

This study will implement guided analysis because units of analysis will arise from both the theory (Situativity Theory) and the data. Thematic analysis is relevant in relating theories from the literature to important issues that arise from the data generated from a study, thus it must be conducted rigorously and methodically to yield meaningful and useful results (Nowell et al., 2019). Concepts will be grouped, related, and categorised (Lumen, 2019). Themes that emerge from the data and theory will then be identified and related to the literature. Emerging theories and existent literature will enhance internal validity and the theoretical level of theory in a case study research (Eisenhardt, 2017). Data indicating the identified themes will be reported.

1.10 ETHICAL CONSIDERATIONS

Before interviewing, ethical issues must be considered and permission will be requested from the Department of Education to pursue the research in the required special needs schools. After being granted permission, the senior education manager will be informed and upon permission being granted, the researcher will engage with principals of the special needs schools to grant permission for the interviews of the relevant educators, followed by a request for informed consent from the educators themselves. Universal principles such as honesty, justice, respect, and confidentiality will be adhered to (AtHope, 2019). Participants will be treated with respect, fairness, and honesty, and it is, therefore, the responsibility of the researcher to emphasise the nature of the study, disclose methods used, as well as to ensure confidentiality and anonymity (ECI Research, 2019). The participants must thus fully understand the reason behind the study and the need for the interview before

providing consent (Siegle, 2019). I will ensure that consent is voluntary and that their confidentiality and anonymity is guaranteed. Also, all information is intended only for research purposes.

1.11 DELIMITATION OF THE STUDY

The study falls within the specialisation of Educational Psychology, a field that focuses on the development of the learner, as well as teaching and learning. The educator and parent play a key role in the acquisition of education to learners diagnosed with autism, thus mitigating the multiple vulnerabilities experienced by learners diagnosed with autism. Although information and perspectives will be sought from educators and parents, it would be limited as information from learners with ASD could have contributed more precisely but will be restricted due to their communication challenges.

1.12 CHAPTER SUMMATION

Chapter Two will provide the Literature review of the multiple vulnerabilities experienced by the learners diagnosed with autism. The understanding of autism: Biomedical perspective.

Chapter Three will also entail the Literature review of the multiple vulnerabilities experienced by the learners diagnosed with autism. The understanding of autism: Educational perspective.

In Chapter Four the theoretical framework in this study will be explained.

Chapter Five will include the methodology of this study.

Chapter Six, Seven and Eight will represent an analysis of the data, according to the research questions.

Chapter Nine will entail discussion of research findings.

Chapter Ten entails the summary of findings, recommendations, limitations, and conclusion of the study.

CHAPTER TWO - LITERATURE REVIEW

UNDERSTANDING AUTISM – BIOMEDICAL PERSPECTIVE

“The concept of neurodiversity provides a paradigm shift in how we think about mental functioning. Instead of regarding large portions of the American public as suffering from the deficit, disease, or dysfunction in their mental processing, neurodiversity suggests that we instead speak about differences in cognitive functioning.”

Dr. Thomas Armstrong cited from *The Art of Autism*, 2020

2.1 INTRODUCTION

Autism is a complex neurodevelopmental condition that forms the biomedical aspects of autism, thus addressing what ASD is, its causes, treatment, and intervention strategies. The exact cause of autism is unknown and is still being investigated as it is the fastest-growing developmental disability that occurs in all racial, ethnic, and socioeconomic groups. This condition is more prevalent in boys than in girls. There has been a remarkable burgeoning of this disorder which is still not fully understood. Issues of this nature are discussed in this chapter to understand the learner with autism who is taught by the educators participating in this study, as well as how their vulnerabilities can be mitigated. Once the biomedical aspects of autism have been identified and addressed, intervention programmes would be constructed which will assist learners in the transition to the educational field, whereby the educational aspects of learners with ASD will be explored in the next chapter.

2.2 HISTORY OF AUTISM SPECTRUM DISORDER

According to Sinclair (2019), the first appearance of autism in historical literature was in 1911 by Eugen Bleuler, a psychiatrist from Switzerland, who used the term to describe a group of symptoms that were traditionally associated to of schizophrenia. Autism

originated from a Greek word *autos*, which was used to describe extreme social withdrawal that was common with psychiatric diseases that presented with psychosis. Although it is now known that autism and schizophrenia are two unrelated disorders, autism was not classified as its own disorder in any diagnostic manual until many years later. Atbasoglu (2020), stated that autism was first described in 1943 by Leo Kanner. In 1944, Kanner renamed the disorder Early Infantile Autism. Kanner described the main symptoms to be autistic aloofness, unable to relate to other people and a fear of change in their environment. Hans Asperger described a similar disorder around the same time, but the children he described all had speech and language skills. This is now known as Asperger Syndrome, which is used to describe a particular type of ASD like other syndromes that are on the spectrum of autism (Mayo Clinic, 2018).

2.3 WHAT IS AUTISTIC SPECTRUM DISORDER?

ASD is a heterogeneous neurodevelopmental disorder that impairs a child's ability to communicate and interact with others (MedlinePlus, 2019). It also includes restricted repetitive behaviors, interests, and activities (Jackson, 2015). These issues cause significant impairments in social, occupational, and other areas of functioning, including cognitive functioning and developmental disorders (Mayo Clinic, 2014). Beginning at an early age and typically continuing throughout their lives, individuals with ASD experience difficulty relating appropriately to others and presents with a wide range of language and communication disorders and peculiarities (Autism Speaks, 2018). learners with ASD frequently encounter difficulty in successfully following and mastering an unmodified school curriculum, have an obsessive insistence on environmental sameness, and are well-known for their atypical and often difficult-to-understand behavior, including stereotypic, repetitive, and self-stimulatory responses (Mandell, 2016).

Moreover, children and youth with ASD often have irregular patterns of cognitive and educational strengths and deficits, including splinter skills and isolated discontinuous abilities (World Health Organisation, 2017). Connected to these multiple and consequential

factors, the Mayo Clinic (2018), states that learners with autism also experience various vulnerabilities that occur as a result of our overestimation of a person with autism, understanding language, social situations, emotions, organisation, and theory of mind. We overestimate problem-solving skills and underestimate sensory difficulties, anxieties, and the effort required to understand the environment (Mayo clinic, 2018). Hence, learners with ASD are often rigid in their thinking due to their theory of mind and are limited in their ability to adapt to a variety of situations (Summerson-Wright, 2016).

Mohamed (2019) amplifies that, the triad of impairments, namely social interactions, social communication, and their social imagination affects the social model of learners with ASD, thus making them unresponsive to people's voices and finds it difficult to build relationships, experience difficulty in understanding and processing information. He further stated they like rigidity in thinking (likes routine and structure) posing a huge challenge in society.

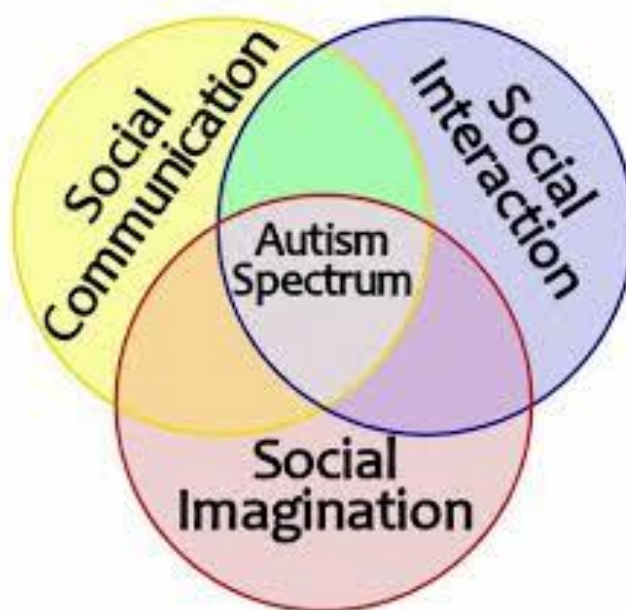


Figure 2.1: Triad of Impairments for ASD

Social Communication, Social Interaction, Social imagination are the Triad of Impairments for ASD (Autism Topics, 2018). According to Ralph (2018), an ‘impairment’ is defined as a difference in a person’s physical, mental, or sensory function when compared to the socially determined norm and ‘disability’ is created by having barriers put in your way to accessing the world by society. These barriers include, attitudinal, physical, and organisational. Albeit the importance of impairment is that it should not be equated with a disability, but the focus should be primarily on the person and secondary, the impairment or disability (Autism Topics, 2018).

I base my notion of disability on the Identity-First Autistic (2016) social model, distinguishing *impairment* as a medical predisposition of a human body and *disability* as the prejudices and discriminatory practices in society that marginalise learners diagnosed with an ASD (Department of Basic Education, 2001a, p 7). Using the terms *impairment* and *disability* interchangeably confuses and weakens the social model, thus as a political principle, learners with ASD should also be treated equally as non-disabled people and offered opportunities to be included rather than excluded. It is not a case of semantics but of determining what aspects require intervention, developing the policies, and implementing those policies to address the need for learners with ASD and mitigate the vulnerabilities that society poses to them.

2.4 WHAT ARE THE SIGNS AND SYMPTOMS OF AUTISM?

According to Shriver (2019), the signs and symptoms of one person with autism can be very different from that of another person with autism. He stated that health providers think of autism as a ‘spectrum disorder,’ which means there is a range of similar features in different people with the disorder. One person with autism may have mild symptoms whilst another may have more serious symptoms, but they both have ASD (National Institute of Child Health and Human Development, 2019).

Although there is a range of possible symptoms, certain actions and behaviors are common in ASD and could flag that a child is on the autism spectrum (Centre for Disease Control and Prevention, 2019). The signs of ASD begin during early childhood and lasts throughout a person's life. Some of the signs and symptoms in children with ASD include:

- not being able to point at objects to show interest (for example, not point at an airplane flying over)
- not looking at objects when another person points at them
- have trouble relating to others or not having an interest in other people at all
- avoiding eye contact and wanting to be alone
- have trouble expressing their needs using typical words or motions
- not play “pretend” games (for example, not pretend to “feed” a doll)
- repeat actions over and over again
- have trouble adapting when routines change
- have unusual reactions to the way things smell, taste, look, feel, or sound
- lose skills they once had (for example, stop saying words they were using)
- having trouble understanding other people's feelings or talking about their feelings
- preferring not to be held or cuddled, or might cuddle only when they want to
- appear to be unaware when people talk to them, but respond to other sounds
- be very interested in people, but not know how to talk, play, or relate to them
- repeat or echo words or phrases said to them, or repeat words or phrases in place of normal language (Center for Disease Control and Prevention, 2019)

2.5 AETIOLOGY OF AUTISM

A brief discussion of the aetiology of autism is necessary to convey my narrative of access to information that would allow the reader to travel vicariously with me through inertia (from not knowing what autism is) to bring me to my present place and space as a researcher in this study. I was immersed in a paradigm of re-thinking and re-consideration. The inclusion of this aspect is to illustrate how I was enlightened through my research. My

understanding of the aetiology of autism is gleaned through my personal experience and training in teaching learners diagnosed with autism. According to Healthline (2018), no single test can diagnose autism, it involves several different screenings, genetic tests, and evaluations, hence here begins my science of understanding what autism meant.

2.5.1 Screening and Diagnosis of Autism Spectrum Disorder

According to the Centre for Disease Control and Prevention (2018), diagnosing autism spectrum disorder (ASD) can be difficult, as there is no medical test, namely a blood test, to diagnose the disorders. The child's behavior and development is observed by a doctor, who then makes a diagnosis. ASD detection vary, namely some can be at 18 months or younger. Whilst some are detected by age 2, when the characteristics become more pronounced, hence a diagnosis by an experienced professional becomes more accurate and reliable (National Institute for Mental Health, 2018). However, many children do not receive a final diagnosis until much older, thus this delay means that children with ASD might not get the early intervention and treatment that they need (Miller, 2020).

- In some cases, through my interaction with parents of learners diagnosed with autism, parents are not aware of these 'early' signs of autism and do not think about autism until their child's speech is delayed and some of their milestones are significantly delayed which is at atypical age (Shiver, 2019). Parents then take their children to a doctor who will then refer them to a specialist who treats children with an autism spectrum disorder, such as a child psychiatrist or psychologist, pediatric neurologist, or developmental pediatrician for an evaluation through a screening process as there are no specific tests to determine the disorder, instead, specialists use these steps to make a diagnosis, such as Developmental Screening and Comprehensive Diagnostic Evaluation (Mayo Clinic, 2018).

Diagnosing an ASD takes two steps:

- Developmental Screening

- Comprehensive Diagnostic Evaluation

2.5.1.1 Developmental Screening

Developmental screening is a short test that indicates if children are learning basic skills when they should, or if they may have delays. During the developmental screening, the doctor might ask the parent some questions or talk and play with the child during an exam to see how she learns, speaks, behaves, and moves. A delay in any of these areas could be a sign of a problem, thus the doctor will request a comprehensive diagnostic evaluation (Center for Disease Control and Prevention, 2019).

2.5.1.2 Comprehensive Diagnostic Evaluation

The second step of diagnosis is a comprehensive evaluation. This thorough review may include looking at the child's behavior and development and interviewing the parents. It may also include a hearing and vision screening, genetic testing, neurological testing, and another medical testing (Center for Disease Control and Prevention, 2019).

2.5.2 Diagnostic analysis of learners with ASD

The Diagnostic and Statistical Manual of Mental disorders - IV (DSM-IV-TR) (American Psychiatric Association [APA], 2000), provides the diagnostic criteria by which we can better understand this disorder. The DSM-IV-TR is a listing of psychiatric disorders and their corresponding diagnostic codes that provides the criteria by which clinicians define and diagnose various psychiatric and developmental conditions. According to the DSM-IV-TR Autism falls under the umbrella term known as Pervasive Developmental Disorders (PDD).

This term encompasses the following disorders, Autism, Asperger's Syndrome, Pervasive Developmental Disorder – Not Otherwise Specified (PDD-NOS), and Childhood

Disintegrative Disorder (CDD). The four disorders classified as PDD in the DSM-IV-TR (APA, 2000) have distinct diagnostic criteria specific to each disorder. The diagnostic criteria for the disorders relevant to this research will be described below.

According to the DSM-IV-TR (APA, 2000, p. 69), for a diagnosis of Autism to be made, two items from the section related to impairment in social interaction must be present:

- Impairment in non-verbal communication, for example, eye contact, facial expressions, and gestures.
- Unable to develop appropriate peer relationships.
- Difficulty in a shared interest, for example, pointing or showing.
- Inability to cope socially and understand or represent emotions appropriately.

According to the DSM-IV-TR (APA, 2000), at least one of the following items must be present concerning impairment in communication for a diagnosis of Autism to be made:

- Speech delay or no speech with no or little attempt to communicate by other non-verbal means.
- Impairment in conversation skills to the point where the individual is unable to start or maintain a conversation.
- Use of language that is stereotyped and repetitive.
- Shows difficulty in make-believe or social play, often chooses to play alone.

According to the DSM-IV-TR (APA, 2000), at least one item must be present with regards to restricted, repetitive and stereotyped patterns of behavior, interests, and activities:

- Abnormal, restrictive patterns of interest.
- The presence of non-functional routines and rituals.
- Repetitive motor actions such as flapping, spinning, and stimming.
- Preoccupation with parts of an object as opposed to the object itself.

2.5.3 Neurological manifestations of ASD

ASD is a non-progressive disorder that causes abnormalities of the cerebellum, brainstem, frontal, parietal, hippocampus, and amygdala which forms the brain structure (Cassim, 2019). Figure 2.2 illustrates the areas of the brain that is affected by autism which stems from abnormal brain development (National Institute for Health, 2016). The cells in the brain are usually smaller and are more densely packed in certain areas and the neurons have shorter, less developed branches, hence these abnormalities impact their speech delay, epilepsy, and developmental delays (National Health Institute, 2016).

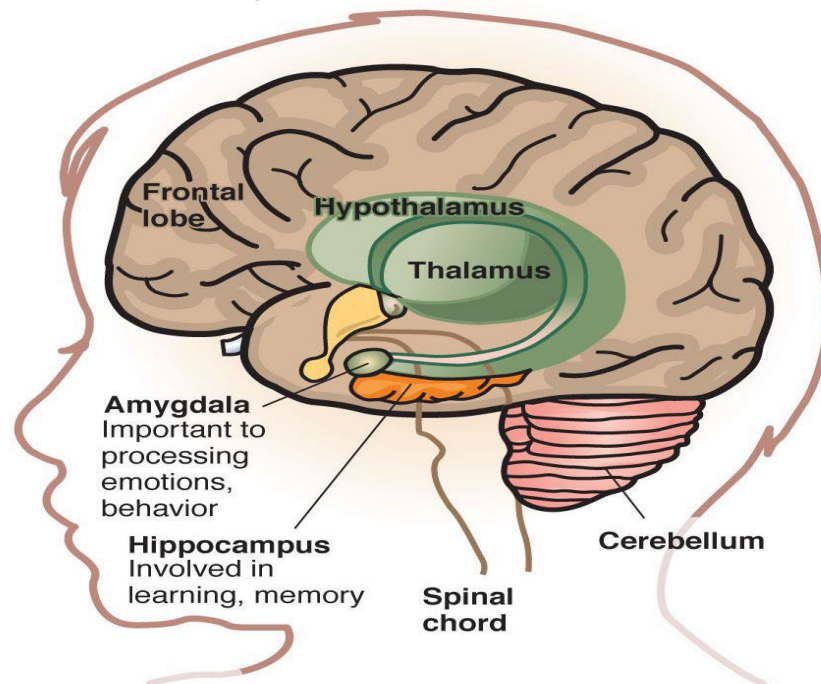


Figure 2.2: Human Brain

The image in Figure 2.2 is a human brain adapted from research by the Journal of National Institute for Health (2016). A child with ASD may also have problems with their brain structure or with certain chemicals in the brain, thus these abnormalities in the brain create a neurodevelopmental condition which is autism (Kahn Academy, 2020). The brain plays

a key role in a person's daily living and it plays vital roles in memory, attention, motivation, and numerous other daily tasks (Villines, 2017). Consequently, through this brain dysfunction learners with autism cannot function 'normally' as typically developing learners. Although learners on this spectrum try very hard to contain their daily demands, sometimes it becomes overwhelming and thus this results in sensory overload which manifests in behavioral problems (Cervera, 2017).

Researchers also believe that there is a gut-brain nervous system link in autism as they share the same neurons and autism-related gene mutation, thus causing gastrointestinal problems that affect autism and behavioral issues (Hosie, et al., 2019). Furthermore, it can become more fraught and complicated when learners on the spectrum are non-verbal, which accentuates their social and communication attributes (National Autistic Society, 2020), besides having an IQ of less than 60 percent and related co-morbidities with autism (Isni, 2018, p. 20). These will be discussed in the subsequent chapters as this study focuses on learners with ASD that are on the lower trajectory of autism.

2.5.4 Causes of Autism Spectrum disorder

The cause of autism remains unclear, but a psychological one has been ruled out (Autism Society, 2015). Looking at the neurological manifestations of ASD, as discussed in the preceding section, studies indicate a primary brain dysfunction, perhaps related to abnormalities that appear to occur in the way the autistic child's brain develops (National Institute of Health, 2016). A genetic component is indicated by a pattern of autism in some families and studies have suggested that some genes may be involved (Autism Society, 2015). According to scientists from the University of Cambridge and Statens Serum Institute in Denmark, some children with autism are exposed to elevated levels of steroid hormones, such as testosterone, progesterone, and cortisol in the womb, thus this is the reason for autism being more prevalent in boys than girls (Cohen, 2014).

The condition also appears common in children born to older mothers or older fathers, notwithstanding closer spacing of pregnancies, prematurity, low birth weight, and being a first-born child (Autism Speaks, 2019). Infection during pregnancy or a prolonged fever also increases the risk of having a child with autism (Ellis, 2019). Some of the causes (multi-factorial) that have been speculated are:

2.5.4.1 Genetic

According to the Queensland Brain Institute (2017), Autism can sometimes run-in families, as genetics plays a key role in the disorder. For others, genetic changes may make a child more susceptible to autism. According to Rudy (2019), there is no single genetic mutation that causes autism, rather over a hundred genes have been implicated in increasing risk. However, she further stated that the presence of one of these genes does not necessarily mean that a child will develop autism, which is why we believe that the environment is an important factor as well.

2.5.4.2 Brain Development

ASD is a heterogeneous neurodevelopmental condition associated with atypical trajectories of brain anatomy, function, and connectivity, distinguishing it from typical development (Medical Research Council, 2016). Although the exact details of developmental changes in ASD vary, one fact that is well established is that ASD has a complex and dynamic neurobiological mechanism(s), with the disorder-related changes in the brain showing variations across ages (Tunc, 2019). Also, the degree to which the brain development in ASD deviates from typical brain development, and how this deviation relates to observed behavioral outcomes at the individual level is still being researched, however, researchers investigated a brain-tissue study which suggests that children affected by autism have a surplus of synapses or connections between brain cells which slows down the brain function during the pruning process (Autism Speaks, 2015).

2.5.4.3 Pesticides

According to Dr. Alice Mao (2016), a professor of psychiatry at Baylor College of Medicine, exposure to pesticides has also been linked to autism. Mao told My Health News Daily that some studies have found that pesticides can interfere with genes involved in the development of the central nervous system. Scientists believe that chemicals in pesticides may adversely affect those who are genetically predisposed to autism, which can lead them to develop a fully developed case of autism.

2.5.4.4 Pharmaceutical products

The use of prenatal pharmaceuticals is thought to be a potential cause of autism (Autism Speaks, 2019). Though the use of prenatal pharmaceuticals, was more widespread from the 1950s through the early 1970s, some prenatal pharmaceutical use still occurs today. Studies are currently searching for the neurological consequences that have been transmitted from generation to generation, and researchers hope to gain a greater understanding of learning disabilities and autism, both of which may have links to prenatal pharmaceutical use (National Institute for Health, 2019).

2.5.4.5 Parental age

There have been many debates and discussions around parental age being one of the causes of autism, however, the National Health Institute (2018) assumes women who are 40 years old have a 50 percent greater risk of having a child with autism than women who are between 20 and 29 years of age. Though researchers have not gained a solid understanding as to why parental age can influence the risk of bearing a child with autism, it is still one of the top theories of what may cause autism (World Health Organisation, 2018).

2.5.4.6 Environmental factors

No single environmental factor causes autism (University of Queensland, 2017). Instead, a range of environmental influences seems to exist, such as, an epidemiological study found that women deficient in Vitamin D during pregnancy had children with an increased risk of autism and another environmental risk is a viral or bacterial infection of the pregnant mother during the first trimester, which has become a common way to study autism in model animals like mice (Ali, et al., 2019).

2.6 TYPES OF AUTISM

2.6.1 Levels on the spectrum

According to the Mayo Clinic (2018), the word ‘spectrum’ in ASD refers to the wide range of symptoms and severity - an umbrella with a range of autistic syndrome at varying degree of severities, also depicted as a rainbow where the colors blend and overlap, representing a particular category of autism, yet the transition from one color to the next on a rainbow is similar to the transition from mild to severe autism (Figure 2.3).

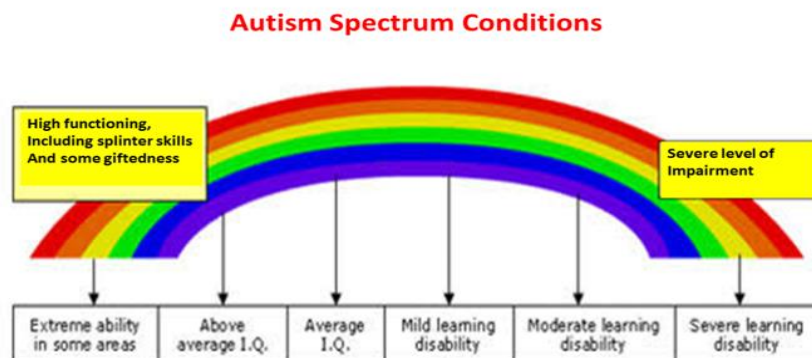


Figure 2.3: Autism Spectrum – The Rainbow Effect (Bhattacharya, 2014)

According to Battacharya (2014), each of these categories has varying degrees of difficulties a person faces with social, verbal, communication, and repetitive behaviors, thus just as a shade in rainbow overlaps and blends with the next color, so does autism making it harder to determine where one level or type of autism starts and where it terminates. During my data generation process with parents and educators, I realised that those learners with ASD had severe learning difficulties which means that they were on the lower spectrum of autism. They were learners who had other comorbidities with autism, such as Attention Deficit Hyperactivity Disorder (ADHD) or epilepsy. According to the Center for Disease Control and Prevention (2018), a learner or person with autism might have average intelligence, have little interest in other people, use limited verbal language, experience intense self-stimulatory behaviors such as hand-flapping, under-react to pain, and over-react to sounds, have very good gross motor skills, and have weaknesses in fine motor skills. Each learner on the spectrum has their own abilities and needs, challenges, and demands (Jackson, 2015).

2.6.2 Classification of autism



Figure 2.4: Spectrum of Disorders (Bhattacharya, 2014)

There are 5 types of ASD (Bhattacharya, 2014) which can be mild, severe, or in between. According to the National Health Institute (2018), these are Asperger's, Pervasive Development Disorder, Childhood Disintegrative Disorder, Rett's syndrome, and Classical Autism.

(a) Asperger's

These classify people who fall under the high functioning autism spectrum. They are smart, intelligent and usually excellent in academics and work life. However, they experience great difficulty with social skills. While they develop communication and language skills in the same way as any other developing child, their deficits become more obvious with age as they struggle to keep up with the expectations of their family and extended community circle.

(b) Pervasive Development Disorder (PDD)

PDD, not otherwise specified is used to classify people who do not fit into any particular category of Autism. They meet some of the criteria for classical autism, but not necessarily all. Their impairments could range from mild to severe, requiring support ranging from anywhere between Level 1 to Level 2. The functioning level is usually moderate to high, barring exceptions where they overlap with other disorder syndromes.

(c) Childhood Disintegrative Disorder (CDD)

CDD, also known as Heller's Syndrome, typically affecting toddlers and preschoolers. In this case, the child grows normally until (at least) the age of 2 and then shows a sudden drop in social, communication, and behavioral skills. CDD is often overlooked initially by the parents as they tend to attribute this sudden impairment as a 'transient and temporary' phase for their child and would expect it to pass.

(d) Rett's Syndrome

Rett's syndrome occurs only in girls – the only form of ASD that can be diagnosed and medically confirmed. Girls with Rett's Syndrome suffer from significant communication impairment. Also, one of the common symptoms of Rett's Syndrome is the girl's limited ability to use their hands for regular activity. Typically, this syndrome deteriorates with the girl's age, thus requiring more support and time.

(e) Classical Autism

Among all the various types of Autism, Classical autism is perhaps the broadest and most predominant form of autism. In technical terms, anyone showing autistic tendencies that satisfy the guidelines laid out by “DSM 5 Autism Spectrum Disorder” is termed *Autistic*. The effects of autism in such people may range from mild to very severe. Research has shown that the brain of autistic children has a fair number of electric impulses than any other normal brain of similar age (National Health Institute, 2018).

2.7 PREVALENCE OF AUTISM

The term ‘prevalence’ of autism usually refers to the estimated population of people who are affected by autism at any given time (National Health Institute, 2017). According to the Centre for Disease Control (2018), 1 in 68 children is diagnosed with an autism spectrum disorder, 1 in 37 boys, and 1 in 151 girls. Boys are four times more likely to be diagnosed with autism than girls (Simons, 2017). The exact reason for this ratio remains unclear however, some researchers believe that girls receive autism diagnosis much later in life than boys as it is harder to spot in girls (Zeliadt, 2018).

Estimated Autism Prevalence 2018

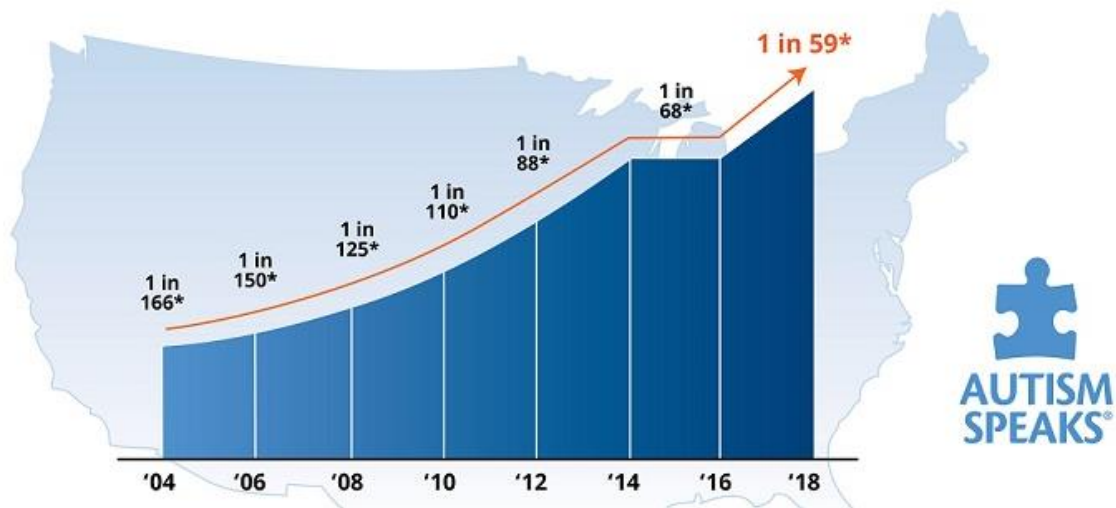


Figure 2.5: Prevalence of Autism

To attest to the growing population of autism worldwide and the incidents of mild to moderate learning difficulties, the CDC reported the prevalence of ASDs has increased remarkably during the past 3 decades (Figure 2.5). The current ASD prevalence in children is estimated to be approximately 1% but has been reported to be as high as 2.6% (World Health Organization, 2017). The apparent increase in ASD prevalence has led to much debate about how much can be attributed to a real increase in incidence owing to etiologic factors compared with the effects of non-etiological factors, such as changes in reporting practices, greater public awareness, changes in referral patterns, and decreasing age at diagnosis (Centers for Disease Control and Prevention, 2018). The unexplained increase in ASD prevalence has raised considerable public concern, with a possible effect on some parents' health care decisions for their children, for example, the claimed connection between the measles, mumps, and rubella vaccine and autism may have harmed some parents' decisions regarding vaccination of their children (Medical Health Institute, 2018). According to the World Health Organization (2017), it is estimated that worldwide 1 in 160 children has ASD, hence this estimates an average figure, and reported prevalence varies substantially across studies. Some well-controlled studies have however reported

substantially higher figures (World Health Organization, 2019). The prevalence of ASD in many low- and- middle-income countries is so far unknown, however, based on epidemiological studies conducted over the past 50 years, the prevalence of ASD appears to be increasing globally (Hahler and Eisabbagh, 2015). There are many possible explanations for this apparent increase, including improved awareness, expansion of diagnostic criteria, better diagnostic tools, and improved reporting (Mahlangu, 2018).

Researchers also believe that autism could have a slightly different presentation in females and that this could lead to a wrong diagnosis in some female cases, it often being diagnosed as mental retardation (World Health Organisation, 2017). Girls also tend to have fewer and less unusual repetitive stereotyped behaviors than boys (Tierney, et al., 2016), but there seem to be some theories about such prevalence according to the American Speech and Hearing Association (2016), which includes:

- (i) There is a 'female autism phenotype' - in other words, autistic females have characteristics that do not fit with the profile usually associated with boys. Autism assessment tools are usually based on male characteristics, leading to under-diagnosis in females. Diagnostic tests for girls should be modified accordingly.
- (ii) Girls are better at camouflaging their difficulties.
- (iii) A range of biological factors, namely genetics and sex chromosomes, may mean boys have a higher prevalence of autism.
- (iv) Autism is an exaggeration of normal gender differences.
- (v) The 'extreme male brain' theory of autism, which focuses on the effects of foetal testosterone on brain development.

Furthermore, girls, in general, may develop better language and social skills than boys, and their interest patterns are also not usually as restricted and technical as those of boys, therefore, they do not show evidence of typical 'autism quality' (Zeliadt, 2018). On the other hand, according to Harris (2014) these girls may be incorrectly diagnosed with other

problems like 'social deficits and learning problems'; girls who refuse to do something may often be diagnosed with "pathological demand avoidance" and girls who will only talk in front of certain people, but are mute or almost mute when with other people, maybe diagnosed as atypical variants of "selective mutism".

2.8 TREATMENT OF AUTISM SPECTRUM DISORDER

According to the Center for Disease Control and Prevention (2019), there are no medications that can cure and treat core symptoms of ASD. However, some medications can help some people with ASD function better, such as, medication that might help manage their behavior, high energy levels, inability to focus, depression and seizures (Gaigg et al., 2018). It is also important to remember that children with ASD can get sick or injured just like children without ASD (National Health Institute, 2017). Regular medical and dental examination should be part of a child's treatment plan (Mayo Clinic, 2018). It is often difficult to decipher if a child's behavior is related to the ASD or is caused by a separate health condition, for example head banging could be a symptom of ASD, or it could be a sign that the child is having headaches (National Autistic Society, 2018). Early diagnosis helps with the interventions and treatment of learners with ASD (Mayo Clinic, 2019). Some interventions and treatment for learners with ASD include:

2.8.1 Early intervention

According to the National Health Institute (2018), research shows that early intervention treatment services can greatly improve a child's development especially children from birth to 3 years old to learn important skills, such as walking, talking, and interacting with others. Early intervention refers to doing things as early as possible to work on your child's ASD characteristics (Raise Children Foundation, 2017). Early intervention for children with ASD is made up of therapies or interventions and services, hence starting intervention as young as possible is most effective in helping the development of children with ASD (Mayo Clinic, 2018). The World Health Organization (2018) urges parents to start before

their child has a formal diagnosis, for example, problems with communication are a big cause of tantrums and other difficult behavior for children with ASD and if children cannot communicate their needs or understand others, they express themselves or get attention to difficult behavior. However, if they learn to communicate effectively as early as possible, they would not need to behave like this. Another reason for starting early is that it can help children with early brain development – the brains of children with ASD develop differently from their peers (Shriver, 2017).

2.8.2 Types of treatments

There are many different types of treatments available, which include, occupational therapy, auditory training, music therapy, discrete trial training, vitamin therapy, anti-yeast therapy, facilitated communication, physical therapy, and sensory integration (Centers for Disease Control and Prevention, 2019). There are different types of treatments and therapies that help learners with ASD, such as, Behavior and Communication Approaches, Dietary Approaches, and Stem cell therapy.

(a) Behavior and Communication Approaches

According to reports by the American Academy of Pediatrics and the National Research Council (2018), behavior and communication approaches that can help children with ASD are those that provide structure, direction, and organisation for the child in addition to family participation, this includes the following:

(1) Applied Behavior Analysis (ABA)

A notable treatment approach for people with ASD is called applied behavior analysis (ABA), which encourages positive behaviors and discourages negative behaviors to improve a variety of skills. Applied Behaviour Analysis (ABA) is currently the most widely known and effective treatment to teach young learners with autism-specific skills and has

been used for many years to teach individuals of varying abilities. These skills are taught on a one-to-one basis, by breaking the process into smaller steps, learning one step at a time, and building on the previous one. In the first year, the focus is on imitation, interaction, play, and response to basic requests. The environment includes toys and activities that are appealing to the individual. The adult then uses a motivator, for example, a specific toy, to expand on requests and activities that the learner initiates. For example, the educator may present two objects to the learner. The educator asks the learner which toy he/she wants and the learner points or names the relevant object. By communicating his needs, the learner then gets the object to play with (Centria Healthcare, 2019).

In the second year, the focus shifts to continued work on language, descriptions of emotions, and pre-academic skills. Different methods are used to help the learner learn, for example, guiding the learner and rewarding correct responses. ABA can be used to teach in all skill areas such as academic, speech and language, socially appropriate behavior, and self-help skills. As individuals with autism have difficulty generalising skills, individuals should be taught in other situations and with other people once they have mastered the one-to-one setting. This should help them to generalise the skills they have learned, however challenging behavior is addressed through functional assessment and analysis (Arts and Humanities Research Council, 2019)

(2) Developmental, Individual Differences, Relationship-Based Approach (DIR, also called ‘Floortime,’

DIR is a model of intervention that provides a developmental framework for interdisciplinary assessment and intervention for autism and other developmental and mental health challenges. It is a comprehensive foundation model that utilises affect-based interactions and experiences tailored to individual needs to promote development.

According to Autism Speaks (2019), The Developmental, Individual Differences, Relationship model (also known as DIR and Floortime), was the first model to identify

the functional emotional developmental capacities that provide the foundation for lifelong learning and relating. The DIR model training was the first to relate these developmental capacities to the biological/neurological individual differences in sensory processing each person brings to the world. It identified relationships as the pivotal force that nurture and optimise development. Further, it was the first to propose a relationship-based model of comprehensive intervention for autism spectrum and sensory processing disorders focusing on the core deficits of relating and communicating (Profectum, 2019).

(3) Treatment and Education of Autistic and related Communication handicapped Children (TEACCH)

TEACHH was developed at the University of North Carolina in the early 1970s by Eric Schopler. This strategy is about teaching functional skills and adapting the environment according to the needs of the learner. It should be a stress-free environment, with structured teaching and the use of visual materials and schedules to help with the acquisition of the skills needed, thus breaking information down into small steps. Teaching should focus on individualised goals and the teaching of independence and developmental skills; skills that are important for future independence. Teaching preparation is very important to make this treatment work (Autism Speaks, 2019).

The PECS and TEACCH programmes are effective methods to use for individuals with autism. It enables the individual to be calm while completing his work because these programmes provide all the necessary information needed, such as what is expected of the learner, how much work is to be completed, what is to be done next, and knowing when the work is completed. Visual support like PECS and TEACCH attract and hold the individual's attention. This enables the individual to focus on the message and simultaneously reduce anxiety. Visual support helps the individual to express feelings and thoughts and make abstract concepts more concrete (National Council for Special Education, 2019). Parent involvement with these intervention strategies has been considered as contributing effectively and has generally been associated with positive

outcomes (Page, 2018). It is therefore of critical importance to involve the parent in their child's schooling, as the parents are their child's first educator and the ones who are mostly affected by their children's autism (Govender, 2019).

(4) Occupational Therapy (OT)

OT helps people work on cognitive, physical, social, and motor skills (SOTadmin, 2018). The goal is to improve everyday skills which allow people to become more independent and participate in a wide range of activities. Autism Speaks (2019) states that OT programmes for people with autism often focus on play skills, learning strategies, and self-care. OT strategies can also help to manage sensory issues. The occupational therapist will begin by evaluating the person's current level of ability, namely how the person: learns, plays, cares for themselves, and interacts with their environment. The evaluation will also identify any obstacles that prevent the person from participating in any typical day-to-day activities. Based on this evaluation, the therapist creates goals and strategies that will allow the person to work on key skills. Some common goals, according to Gee, Nwora, and Peterson (2018) include:

- Eating
- Grooming
- Independent dressing
- Using the bathroom
- Fine motor skills like writing, coloring, and cutting with scissors

(5) Sensory Integration Therapy

Sensory Integration Therapy helps autistic children as they have great difficulty processing sensory information such as textures, sounds, smells, tastes, brightness, and movement. These difficulties can make ordinary situations feel overwhelming. As such, they can interfere with daily function and even isolate individuals and their families. Sensory

Integration Therapy helps the person deal with sensory information, such as, sight, sounds and smells, and also helps a child who does not like to be touched. As a result, interventions that address sensory difficulties are among the most requested by parents of children with autism. Sensory integration therapy, as practiced by occupational therapists, use play activities in ways designed to change how the brain reacts to touch, sound, sight and movement (Autism Speaks, 2018).

(6) Speech Therapy

Speech Therapy helps to improve the person's communication skills as they may have major problems with both speech and nonverbal communication. They may also find it very hard to interact socially. For these reasons, speech therapy is a critical part of treatment for autism. Speech therapy can address a wide range of communication problems for people with autism.

According to Autism Speaks (2019), a person with autism may:

- Babble with word-like sounds.
- Not talk at all.
- Hum or talk in a musical way.
- Utter grunts, cries, shrieks, or throaty, harsh sounds.
- Use foreign-sounding "words" or robotic-like speech.
- Parrot or often repeat what another person says (called echolalia).
- Use the right phrases and sentences, but with an unexpressive tone of voice.
- The person's language, if present, is simply too hard to understand.

According to the National Autistic Society (2019), a person with autism may have one or more of these communication challenges:

- The trouble with conversational skills, which include eye contact and gestures.

- Trouble understanding the meaning of words outside the context where they were learned.
- Memorisation of things heard without knowing what has been said.
- Reliance on echolalia - the repeating of another's words as they are being said - as the main way to communicate.
- Little understanding of the meaning of words or symbols.
- Lack of creative language.

Consequently, these challenges demand that a child with autism must do more than learn how to speak. The child also must learn how to use language to communicate. This includes knowing how to hold a conversation. It also includes tuning into both verbal and nonverbal cues from other people such as facial expressions, tone of voice, and body language (Saggers, 2016).

(7) The Picture Exchange Communication System

This system uses picture symbols to teach communication skills. According to Reynolds & Dombeck (2019), The Picture Exchange Communication System (PECS; pronounced "pex") is a visually presented method for teaching children with an ASD to comprehend language. The PECS method has six sequential and systematic phases. Each one breaks the task of language acquisition into small steps. Each phase must be presented in order. As children master each phase, they are advanced to the next appropriate phase. The first PECS phase is non-verbal and silent. Therapists physically prompt children to exchange pictures for specific desired objects. The purpose of phase one is simply to help children make a connection between the pictures and the various desired objects. A variety of objects, treats, and activities are offered so that the children do not mistakenly learn that the act of exchanging pictures for desired objects or activities is limited to a particular type of object or activity. However, in this first stage, children are not required to learn to distinguish between the different pictures. Once children learn to exchange pictures for objects or activities, they are ready for phase two (Ash, 2014).

The second phase of PECS is designed to help children understand how to start communication. The therapist introduces a communication board in this phase, which remains non-verbal. Children learn to remove pictures from the communication board and hand them to the therapist to receive their desired object or activity. As this phase continues, the therapist gradually increases the physical distance between him or herself and the students. Because of this increased distance, children learn that they must make a physical effort to get what they desire. They must get up from their seat, go to the communication board, remove the picture, and then walk it over to the therapist to make the exchange. When children have internalised the need to make a physical effort to obtain their reward, they are ready for phase three (Raisingchildren, 2017).

During phase three, children are taught to distinguish between the different pictures. Having learned that pictures can be exchanged for rewards, they now must learn that each picture is associated with a specific reward. To get this lesson across, the therapist presents the children with a picture of the desired object and a picture of an object that the children do not desire. Separately, the trainer also presents both the desired and undesired objects. The pictures are placed on the communication board, and the children are encouraged to start their usual routine of exchanging pictures for rewards. However, unlike in prior phases where children always received rewards, in this phase, they receive the object indicated by the picture, whether they want that object or not. The therapist begins using words during this phase. If the children give the trainer a picture of crayons, the trainer says, "You want crayons", while presenting them with the coloring item. When the children protest, the therapist says, "Ask for a treat", to encourage the child to give the appropriate picture. This prompt encourages the children to return to the communications board and actively look at the pictures. Once children can distinguish between a variety of pictures to obtain the rewards that they want, they are ready for phase four (Rudy, 2019).

The fourth phase of PECS involves teaching the basics of sentence structure. Traditionally, the first sentence taught is "I want", because it is very motivating, and it corresponds with the first three phases which are about getting something you want. Without using spoken

words, the therapist guides the children to a sentence strip consisting of a picture representing "I want." The children are physically prompted to place a picture of an object that they desire at the end of the sentence strip. The child then exchanges the completed sentence for the desired object. When children can reliably create and exchange simple sentences for desired objects and activities, therapists begin speaking the sentences out loud. This helps the children make connections between the visual sentences that they have made and the spoken language. For example, the therapist says "I want the book" when children hand them a completed sentence strip indicating that they want a book. Children are ready for phase five when they spontaneously complete sentence strips and successfully exchange them for desired objects or activities (Victor, 2018).

Phase five introduces the phrase, "What do you want?" into the picture exchange. The therapist simply asks the children what they want, and then guides them to the communication board. Once children consistently demonstrate that they know how to indicate what they want when asked, they are ready for phase six. Children often master phase five very quickly (SOTadmin, 2018).

Phase six works to expand on the sentence completion tasks first presented in phase four. Therapists introduce children to new and different phrases such as, "I see toys", or "I like toys", and encourage them to respond. Emotion and attribute descriptors are taught as the process continues. For example, the therapist might encourage children to ask for the yellow pillow or the big stuffed animal. Alternatively, children may be prompted to describe how they feel. Phase six continues in an ongoing and expansive way as long as the picture exchange process continues to be valuable or necessary for facilitating communication. PECS is a valuable teaching and learning tool. It also may be used to help children transition between activities or tolerate changes in routine (Bourque et al., 2016).

The picture exchange metaphor taught in PECS is also used to help children understand the concept of a schedule, for example, visual schedules are created by placing pictures representing the day's activities on a communications board or wall area, such as, pictures

representing dressing, bathroom time, eating, therapy, school, and other activities which they would use in their daily activities (Trembath, 2015). Children learn to check their schedules to know what activities will come next, thus eliminating their stressors (Bhattacharya, 2014).

(b) Dietary Approaches

According to David and Dubie (2019), many dieticians request for changes in diet, such as, removing certain types of foods from a child's diet and using vitamin or mineral supplements as dietary treatments are based on the idea that food allergies or lack of vitamins and minerals cause symptoms of ASD, however, some parents feel that dietary changes make a difference in how their child acts or feels. According to Chistol, et al. (2018) many autistic children have food aversions and sensitivities, due to high oral sensory sensitivity, thus causing them to display behavioral issues especially during mealtimes such as tantrums, extreme food selectivity, and ritualistic behaviors. They also found inadequate nutrition to be more common among children with autism than in those unaffected by the disorder, especially low intake of calcium and protein, which is crucial for building strong bones, growth, and mental development (Autism Speaks, 2018). Hence, for children with ASD, a nutritious, balanced eating plan can make a world of difference in their ability to learn, how they manage their emotions, and how they process information because children with ASD often avoid certain foods or have restrictions on what they eat, as well as difficulty sitting through mealtimes, they may not be getting all the nutrients they need (Ansel, 2019). According to Sathe, et al. (2017), studies evaluated gluten/casein-free diets improved communication, challenging behaviors, and gastrointestinal symptoms in Children with ASD.

(c) Stem Cell Treatment

Pradeep Mahajan (2018), a Regenerative Medicine Researcher reportedly said that cell-based therapy in autism aims to address neurologic, gastrointestinal, and

immunologic disturbances in Children with ASD which are known as Mesenchymal Stem Cells (MSCs) hence, assures the management of autistic children, likely owing to their immunomodulatory capacities and the treatment thereof to ameliorate intestinal and systemic symptoms, neurologic function and secretes anti-inflammatory cytokines and survival-promoting growth factors. According to Liu, et al, (2019) currently, the available options of behavioral therapies and pharmacological and supportive nutritional treatments in ASD are only symptomatic and given the disturbing rise in the incidence of ASD. The fact that there is no effective pharmacological therapy for ASD, there is an urgent need for new therapeutic options, such as MSC. Studies have shown that administration of MSCs improves some behavioral symptoms and function in autistic children as the treatment is variable and multimodal (Siniscalco, et al., 2018). Furthermore, autism is a neurodevelopment disorder accompanied by a weak immune system and neuroinflammation that occurs in early childhood, hence ASD is incurable, however, it can be managed by educational and medical interventions, such as cell-based therapy which has been shown to improve blood perfusion in the brain, thus, it may also be effective in improving motor skills, social skills, and cognition in patients with ASD (Mahajan, 2018).

2.8.3 Medication therapy

According to Ghanizadeh, et al. (2015), the Food and Drug Administration (FDA) has approved two drugs for treating irritability associated with autism, namely risperidone and aripiprazole. The prevalent behavioral problems associated with an autism spectrum disorder, including repetitive behavior, communication, and social issues, have not been able to be improved by medication at this stage since there are no drugs currently that have been approved to address these core symptoms (Carmosino, 2018). However, according to (Basel, 2018), a breakthrough may be on the horizon as a major Swiss pharmaceutical company, Roche, says it has received a designation from the Food and Drug Administration (FDA) to help expedite what could be the first drug to treat these core characteristics of autism. Roche released the news in January 2018 that the FDA has granted its breakthrough

therapy designation for the development of ‘balovaptan,’ a drug that has the potential to improve “core social interaction and communication” in those with autism. Thus, results from a clinical trial in adults with autism released in 2017 indicate that ‘balovaptan’ was successful in helping to improve challenging social behaviors and communication in learners with ASD which was deemed safe and well-tolerated (Conneely, 2018).

2.9 SOCIOLOGY OF AUTISM

The disability and impairment binary is central to the social model (Neuroscience, 2019) Whilst disability can at times be severe enough to impair optimal daily activities, people with disabilities experience impairment, as well as disability, though not in separate Cartesian compartments (National Autistic Society, 2018). The social model of disability says that disability is caused by the way society is organised causing systemic barriers, negative attitudes, and exclusion by society (purposely or inadvertently) which means society is the main contributory factor in disabling people (Identity-First Autistic, 2016). While physical, sensory, intellectual, or psychological variations may cause individual functional limitations or impairments, these do not have to lead to disability unless society fails to take account of and include people regardless of their differences (Ellis, 2018). Novella (2014) adds that the medical model paradigm equates disability with impairment or differences which should be ‘fixed’ or changed by medical or other treatments, even when the impairment or difference does not cause pain or illness. The medical model looks at what is wrong with the person and not what the person needs, thus creating low expectations and leads to people losing independence, choice, and control in their own lives (Identity-First Autistic, 2016).

2.10 AUTISM AND RELATED CONDITIONS

Many related conditions are attributed to autism, hence Isaacs (2014, p. 6) argues that " ... there is no such thing as 'pure' autism and that autism is like a ‘fruit salad,’ made up of a range of underlying conditions which together, like a blended fruit salad, give the

appearance of a single condition," hence autism, a neurological disorder, seldom occurs alone and tends to overshadow the presence of other difficulties. Research has highlighted that autism co-occurs with various other developmental, psychiatric, and medical conditions (Kennedy, 2019). Some researchers disagree about the constructs of ' co-morbidity and autism', 'co-morbid psychiatric disorders and autism', 'medical aspects of autism' and 'associated conditions in autism' (Rice and Ryst, 2015). It is therefore difficult to determine what type of related condition they refer to, and whether it is an additional diagnosis with the autism, or if it is part of the autism. Seeing that some researchers do not agree on what type of related condition it is, I will only mention the conditions that are commonly known as 'an additional diagnosis of autism' or as 'part of autism' and will call it 'related conditions of autism.'

2.10.1 Mental Retardation (MR)

Research shows that autism is far more likely to be within the mental retardation range than the compensatory intellectual gift range (Nordqvist, 2017). Mental Retardation is not an essential diagnostic feature of autism however, many professionals believe that it is a co-morbid condition of autism (Vipul, 2015). Autism, with the associated diagnosis of MR, is usually in the moderate IQ ranges of 35 - 50, and 75% of the children with Autistic Disorder function at a retarded level (Gluck, 2019). According to Bishop, Farmer, and Thurm (2015), 80% of people with classic autism have an IQ under 70. However, when a child's mental age does not exceed that of a normal 18 month old infant, it may be difficult to separate autism from profound and severe mental retardation. On the other hand, with overall intellectual retardation, there will also be a social, communicative, and imaginative difficulty (Vipul, 2015).

2.10.2 Attention Deficit Hyperactivity Disorder (ADHD)

Attention deficit hyperactivity disorder (ADHD) is a complex neurodevelopmental disorder that is more prevalent in boys than girls and often interferes with an early, accurate

diagnosis of autistic spectrum disorder (Legg, 2018). It often happens that children with Autistic Disorder exhibit hyperactivity, short attention span, and impulsivity which is usually associated with ADHD (Society of Clinical Child and Adolescent Psychology, 2017). These children are therefore often diagnosed incorrectly with a behavioral disorder, instead of autism and ADHD (Legg, 2018). According to Ronald (2016), a psychiatrist who specialises in autism in Belgium, states that ADHD is a co-morbid condition of autism, closely associated due to the characteristics and behavioral disorders. The misdiagnosis of such learners impacts learning and development, hence a correct diagnosis at an early age of a child's life is crucial so that intervention strategies can be implemented (American Psychiatric Association, 2019).

2.10.3 Sensory difficulties

Children with autism explore their world through their senses and recognise people through their senses e.g., a specific smell (Patrick, 2016). In the 1970s, it was believed that autism was caused by a brain injury that affects the sensory channels, leading to misinterpretation of information causing the child to feel that the world does not make sense, thus it was therefore hypothesised that sensory issues were a primary characteristic feature of autism and should be considered in the diagnostic classifications (Grapel, Cicchetti & Volkmar, 2015). Today, however, it is still believed that sensory issues are part of their autism and can cause developmental, attention, behavioral, emotional, social, and learning problems (Essays, 2018).

Several people with autism have communicated that they are sensory-overloaded or hypersensitive (Omar, 2019), such as Temple Grandin, the most noted high functioning person with autism in the world today, believes that sensory issues are a big part of behavior problems in children with autism (Grandin, 2015). Grandin has many sensory issues, and the one that affects her the most is her hypersensitivity to sound. She says that when she was a child, the school bell hurt her ears: " ...it felt like a dentist drill hitting a nerve." (Grandin, 2019, p. 94). Sounds that are most likely to hurt children with autism are high-

pitched, shrill, intermittent sounds like fire alarms, smoke detectors, microphones, and even certain ring tones on cellular phones (Autism Speaks, 2018).

Grandin further added that children with autism also often have difficulty with hearing auditory detail. She says that when she was young, she could understand what people were saying when they spoke directly to her. However, when they talked fast, she could not make sense of what they were saying: " ... it sounded like gibberish." (Grandin, 2019, p. 101). Sensory issues can be triggered almost any time or anywhere, whether the individual is experiencing an anxious moment or not, sensory integration challenges can overpower a person's ability to control him or herself (Davis, 2018).

In Olga Bogdashina's (2016) book on 'Sensory Perceptual Issues in Autism and Asperger Syndrome', a quote by Sean Barron explained his hypersensitivity to textures: "I was hypersensitive to the texture of food and had to touch everything with my fingers to see how it felt before I could put it in my mouth. I really hated it when food had things mixed with it...I would get violently sick, whilst Donna Williams explained her hypersensitivity to sounds like a: " ... total horror of sounds... " (Bogdashina, 2016, p. 82). Sensory issues may cause children with autism to experience sensitivity to cold and pain, they may injure themselves in various ways like biting or head banging, the child may be tactile defensive, refusing to wear certain clothes, and have difficulties brushing their teeth (Grandin, 2015). Furthermore, visual issues may cause the child to be sensitive to light (Bullock, 2018).

2.10.4 Behavioural difficulties

According to the American Psychiatric Association (2019), individuals with ASD experience a range of behavioral symptoms, such as hyperactivity, short attention span, impulsivity, aggressiveness, self-injurious behaviors, and temper tantrums. Those individuals with self-injurious behaviors may bang their head, or bite their finger, hand, or

wrist (American Psychiatric Association, 2019 & Omar, 2019). Donna Williams says that sometimes she cannot control herself when stressed and will easily end up "... attacking myself and attacking others..." (Williams, 2014, p. 62). Individuals with autism often attack someone very close to them when stressed or cross (Torrado, et al., 2017). Williams confessed "I really liked my class teacher...But it was the very fact I had warmed to her that meant I would throw my chair, spit, stamp, swear..." (Williams, 2014, p. 63). Individuals with autism often experience stress and anxiety at varying degrees depending on the situation, problem, or stressors (Davis, 2018). Problem behaviors are pervasive, and it is more likely for young learners with ASD to develop problem behaviors, thus these behaviors are key to the presence of underlying social, communication, and sensory impairments and without proper intervention, problem behavior can worsen (World Health Organization, 2019). The child's behavior should thus guide professionals towards more accurate diagnosis, treatment, and intervention methods (Carrim, 2019).

2.10.5 Epilepsy

According to Klein (2019), epilepsy is a neurological disorder characterized by sudden recurrent episodes of sensory disturbance, loss of consciousness, or convulsions, associated with abnormal electrical activity in the brain, which is a common comorbid of autism. The co-occurrence of autism and epilepsy is almost certainly the result of underlying factors predisposing to both conditions, including both genetic and environmental factors and the rate of autism in epilepsy is much higher in those with intellectual disability (Besag, 2017). It is understood that these medical disorders impair brain functions, which are necessary for normal social, communicative, and imaginative development (Nauert, 2018). Approximately 1 in 6 pre-school learners with autism have epilepsy (World Health Organization, 2018). This could be so-called infantile spasms, psychomotor epilepsy (temporal lobe epilepsy or complex partial seizure epilepsy), or a combination of various types of seizures, and some are easily controlled, and others are intractable (Epilepsy Foundation, 2017). There are higher mortality and morbidity (rate of disease) associated

with seizures in ASD (Khan, 2017). Parents attested to the high rate of epilepsy in learners with ASD through my discussions and interactions with them.

2.10.6 Depression and anxiety

Sarris (2018) contended that depressive and anxiety disorders have been the most prevalent related psychiatric disorders in individuals with autism. Williams suffered from depression and described it as " ... extreme lows as well as highs ... " (Williams, 2014, p. 48). Anxiety disorders and symptoms are reported in 7 - 84% of individuals with autism (ResearchGate, 2016). According to Dr. Elisabetta Burchi and Dr. Eric Hollander (2019), depression and anxiety are caused by the autism itself among other related psychiatric disorders, such as Mania, Schizophrenia, Catatonia, Inattention and over-activity, Tics or Tourette's disorder, sleeping problems, eating problems, self-injury, and aggression (Uljarevic, Nuske, Vivanti, 2016).

The National Autistic Society (2017) states that learners diagnosed with autism experience extreme anxiety due to a plethora of issues, such as coping with change, sensory needs, social anxiety, and difficulty understanding emotions. Hence, it is obvious from the above that autism is an extremely complex disability wherein the individual not only has to cope with the 'triad of impairments,' but also with other associated conditions. With such a variety of impairments, it is important to know who and how it affects, the prevalence of this disability in the population and the gender, to know how often one will come across an individual with autism.

2.11 CONCLUSION

The literature review focused on ASD, providing an understanding of ASD and the vulnerabilities that learners diagnosed with autism experience. It also presented an in-depth view of the biomedical aspects of autism giving parents and educators a better understanding and knowledge of autism. This chapter also clarified some of the co-

morbidities that are closely associated with ASD, thus some learners are misdiagnosed/diagnosed late, hence impacting negatively on their learning and development notwithstanding that no medication can cure autism, however, early intervention programmes and treatment can help in the mitigation of vulnerabilities experienced by learners with autism. The literature aimed to provide a critical summary of the current research relevant to the research question to mitigate the vulnerabilities experienced by learners diagnosed with autism. The next chapter will look at the literature review from an educational perspective.

CHAPTER THREE - LITERATURE REVIEW - UNDERSTANDING AUTISM - EDUCATIONAL PERSPECTIVE

“It takes a village to raise a child. It takes a child with autism to raise the consciousness of the village.”

Coach Elaine Hall cited from The Art of Autism, 2020

3.1 INTRODUCTION

In this chapter, the literature will explore the educational aspects and define inclusive education in the context of South Africa and the concept of ‘barriers to learning’, as defined by the Education White Paper 6. For one to understand the concept of inclusive education, one needs to understand the historical context of special education, and the need for education to take place in a unified system, irrespective of race, gender, disability, age, ethnicity, language, or class. It is against this backdrop that the chapter will narrow its focus to learners diagnosed with autism spectrum disorder, providing an understanding of the nature of the disorder and amplify relevant research around the education of such learners, thus exploring the social model and assessment strategies for effective treatment and interventions for learners diagnosed with autism, hence learners with autism in this study fall on the lower trajectory of the spectrum and are placed in special needs schools.

The chapter will further highlight some of the vulnerabilities experienced by learners with autism and how such vulnerabilities can be mitigated through the intervention programs and the engagement of educators, psychologists, speech, and occupational therapists.

3.2 THE EDUCATION SYSTEM FOR LEARNERS DIAGNOSED WITH AUTISM

3.2.1 A global perspective of Inclusive Education

According to Maya Kalyanpur (2018), a researcher in the field of special education predicated that inclusive education emerged from a historical context of segregated schooling in the United States in the 1970s then filtered into other countries in the 1990s, advocating schooling for all, thus the recognition of human rights and social justice worldwide with the aim of inclusive education to blend special education and general education training more cohesively so that teachers can teach all children and reduce the stigmatisation and segregation of learners who might need additional support (Bansod, 2018). Hence, the Salamanca Statement and Framework for Action, adopted at the World Conference on Special Needs Education in 1994 which indicated the inclusion of all learners in one unified education system and called on all governments to commit to the improvement of their education systems to support the development of special needs education as an integral part of all education programmes (UNESCO, 1994). Furthermore, the UN agency for education, UNESCO was requested to ensure that special needs education forms part of every discussion dealing with education for all, enhancing teacher education in this field by getting support from teacher unions and associations and stimulating the academic community to do more research into inclusive education and disseminate the findings and the reports. Furthermore, UNESCO was also requested to use its funds over the five years, 1996-2001, to create and expand programmes for inclusive schools and community support projects, thus enabling the launch of pilot projects (UNESCO, 1994).

The founding principles of this document were discussed and included a call to all governments to improve their education systems to accommodate children of varying abilities, to adopt the policy of inclusive education, to liaise with countries who have experience in inclusive education systems. The call was also meant to put forward the principles of “decentralised” and “participatory mechanisms” in the Salamanca statement

for planning, monitoring and evaluating the educational provision available in one's country. It also highlighted involving the families and communities of children with varying disabilities in planning for an education system that can accommodate all, to emphasise the importance of early identification and intervention and finally the recognition and need for systemic change (UNESCO, 1994).

The Framework for Action (2017) says, "inclusion and participation are essential to human dignity and the enjoyment and exercise of human rights." In the field of education, this is reflected in bringing about a "genuine equalization of opportunity". Special needs education incorporates proven methods of teaching from which all children can benefit by adapting to the needs of the child, rather than the child being fitted to the process. The fundamental principle of the inclusive school, is that all children should learn together, where possible, and that ordinary schools must recognise and respond to the diverse needs of their learners, while also having a continuum of support and services to match these needs (Bansod, 2018).

The cornerstone of this study is ASD. The idea of including individuals with ASD in public education settings has its roots in disability rights, challenges to discrimination of individuals with special needs, and resulting federal legislation. It is arguably one of the most important events of the passing of the Education of All Handicapped Children Act of 1975, hence subsequent federal legislation passed in 1990 as the Individuals with Disabilities Education Act and Individuals with Disabilities Education Improvement Act impacted inclusive education for learners with ASD (Campbell, 2016). A key component to federal law is the mandate that learners with special education needs, including individuals with ASD, be educated with peers in the least restrictive environment possible to strengthen their weaknesses, thus this means they should spend as much time as possible with peers who do not receive special education (Morin, 2018).

3.2.2 South African legislation supporting Inclusive Education

The South African Constitution entrenches our rights to “human dignity, the achievement of equality and the advancement of human rights and freedoms”. Providing inclusive education in South Africa means that many human rights issues are affirmed, and historical, inequitable education practices are reversed.

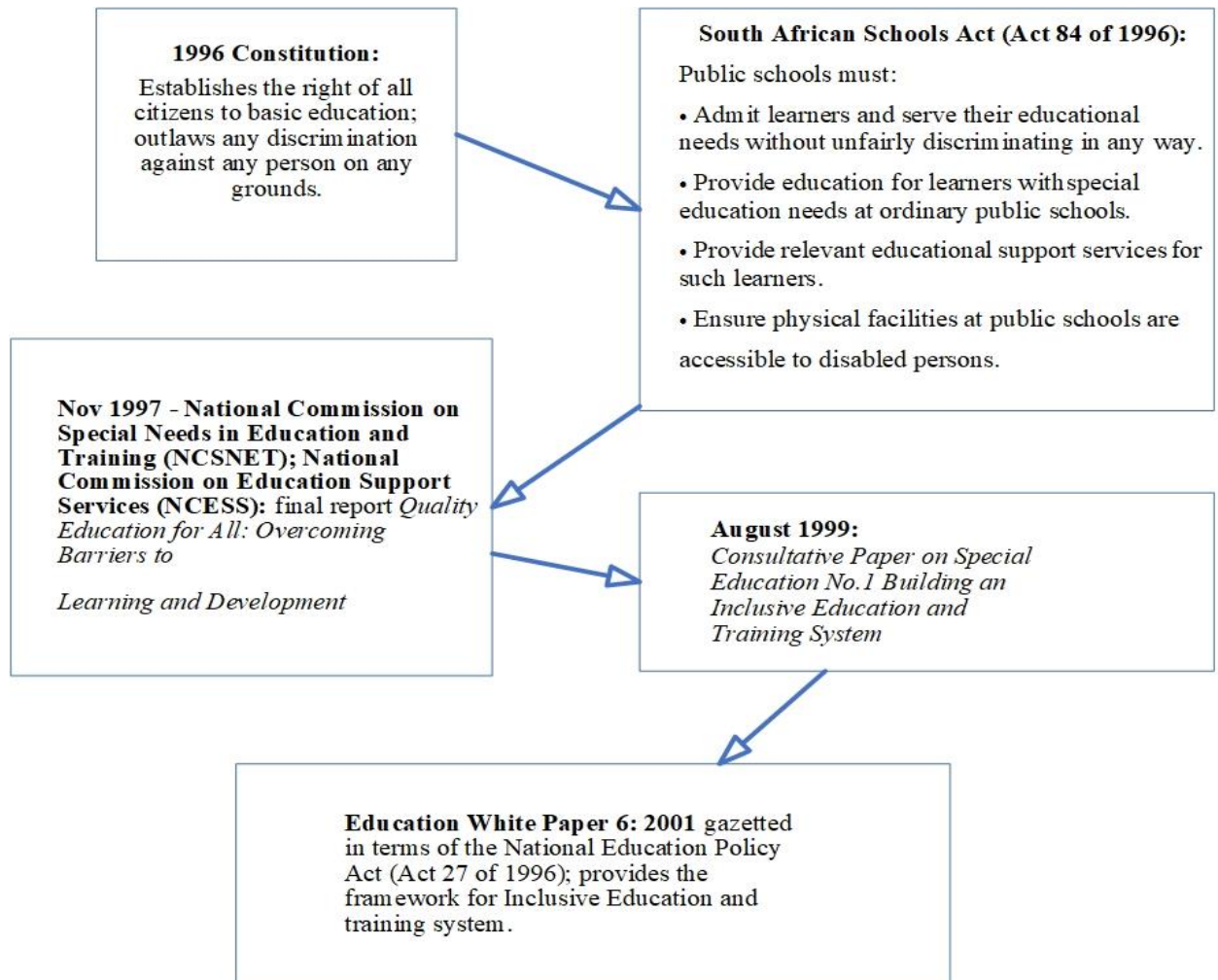


Figure 3.1: Legislative Process – White Paper 6

This diagram briefly outlines the legislative process that has led to Education White Paper 6 (Department of Basic Education, 2007, p. 11)

3.2.3 Inclusive Education in South Africa

To understand the inclusive education policies in South Africa aforementioned, the historical perspectives and legislation entailed discussion of the Salamanca Statement and its guiding principles. This emphasised a systemic change due to the apartheid system classifying and categorising people in terms of racial categories. Education provisions and support services were unequally distributed among race groups with Blacks (i.e. blacks, Indians, coloreds) receiving the least support, hence not only racial classification was used for the organisation of education support but disabilities were also used to categorise learners (UNESCO, 1994).

In South Africa, like many other countries, education was based on the concept of exclusion, which meant in practice that only children and youth who were perceived as 'normal' went to mainstream, ordinary schools. 'Special needs' children were supposed to be sent either to special schools, or special classes, hence, to get a special placement, learners were assessed and then classified into different categories, such as Attention Deficit Disorder, Learning Disabilities, moderately or severely 'mentally handicapped,' and others. These labels determined where learners were placed in special education facilities. However, in practice, due to the inequitable delivery of education in South Africa, only some privileged children, such as the white children, were placed in these special facilities. Some disadvantaged learners were accepted into the schools, but most were ignored or rejected or not included in the educational system at all (Msimang, 2016).

These inequalities in education provision resulted in highly specialised and costly education provision for a limited number of learners, hence whilst those special schools that accommodated white disabled learners were extremely well-resourced, those other few special schools that catered for black disabled learners were systemically under-resourced. Given this historical perspective of discrimination, neglect, and marginalisation, the South African Constitution and subsequent education laws and policies were introduced to address these imbalances, neglect, and discrimination (Groot, Visser & Lubbe, 2015).

3.2.4 Inclusive Education Policy Document: Education White Paper 6

The Inclusive Education Policy outlined in the policy document Education White Paper 6 Special Needs Education: Building an Inclusive Education and Training System introduced a major policy shift from the past as discussed in the anterior section. This policy built on other laws aimed at ensuring access to education support for learners who experience barriers to learning, move away from segregation according to disabilities, how learners will be identified, assessed, and incorporated into special, full service and ordinary schools in an incremental manner, how facilities and support services will be provided, and how educators will be assisted to cope with a diversity of learning and teaching needs, (Department of Education, 2001).

The policy also implemented a national advocacy and education programme on inclusive education, planning and implementing a targeted outreach programme, provide a wider distribution of educational support services in line with learners' disability requirements, thus learners requiring low-intensive support will receive this in ordinary schools and learners requiring moderate support will receive this in full-service schools. Meanwhile, learners who require high-intensive educational support will continue receiving such support in special schools (Department of Education, 2001a). Furthermore, special schools will provide services and programmes for learners who require a high-intensive level of support which mainstream schools are unable to provide. Particular attention was drawn on special schools to raise the quality of education thus providing expertise and support, especially to professional support in curriculum, assessment, and instruction, as part of the district support team to neighbouring schools, particularly 'full-service' schools (Department of Education, 2001, p. 21).

The guiding principles in Education White Paper 6, Inclusive Education according to the Department of Basic Education (2007) were as follows:

- (a) Maximising the participation of all learners in the culture and the curriculum of educational institutions and uncovering and minimising barriers to learning
- (b) Acknowledging that all children and youth can learn and that all children and youth need support.
- (c) Enabling education structures, systems, and learning methodologies to meet the needs of all learners.
- (d) Changing attitudes, behavior, teaching methods, curricula, and environment to meet the needs of all learners.
- (e) Accepting and respecting the fact that all learners are different in some way and have different learning needs that are equally valued and an ordinary part of our human experience.
- (f) Acknowledging and respecting differences in learners, whether due to age, gender, ethnicity, language, class, disability, HIV, or other infectious diseases.
- (g) Broader than formal schooling and acknowledging that learning also occurs in the home and community, and within formal and informal settings and structures.
- (h) Empowering learners by developing their individual strengths and enabling them to participate critically in the process of learning.

3.2.5 Transitioning from Special Education to Inclusive Education

From the antecedent sections, it was noted that in South Africa, like many other countries, education was based on the concept of exclusion, which meant in practice that only children and youth who were perceived as ‘normal’ went to mainstream, ordinary schools. ‘Special needs’ children were supposed to be sent either to special schools, or special classes. To get a special placement, learners were assessed and placed according to their disabilities, such as Attention Deficit Hyperactivity Disorder (ADHD), Learning Disabilities, moderately or severely ‘mentally handicapped’, and others. These labels determined where

learners were placed in special education facilities, however, there was a transformation from the traditional ‘special needs’ approach to an ‘inclusive approach, whereby learners had a different form of assessment. The traditional approach to identifying barriers to learning are approaches that are influenced by the medical model and the inclusive approaches are influenced by the social model and the current inclusive policy encourages us to use these approaches for assessing barriers to learning (Department of Basic Education, 2007, p. 19).

(a) Medical Model

According to the Department of Basic Education (2014, p. 18), a medical model has been used to understand many aspects of child development in the context of special needs education, hence, this meant that children did not learn easily like other typical learners and were viewed as being the ‘patients’ as if they had a disease that needed accurate diagnosis and treatment which were usually provided by a health professional, such as, a doctor, psychologist, speech and hearing therapist, or an occupational therapist. This thinking led to ‘special needs’ children being educated separately and perceived them as ‘problem’ children. They were segregated from each other, as special schools and special classes were set up to cater to different kinds of learning and developmental delays. So, children were categorised and often placed in schools specialising in that category of special needs, such as schools for children with intellectual disability, hence the medical model advocated that a barrier to learning resides within the individual (Smith, 2018). Consequently, this study focuses on ASD which is intrinsic to the individual and it is a developmental disability, thus the medical model viewed this as a defect in or failure of a bodily system, hence, it required a need to assess the individual and attempt to “fix” the problem within the individual (Centre for Disease Control and Prevention, 2019).

(b) Social Model

Contrary to the medical model, Haegele & Hodge (2016, p. 56), asserts that the social model is not only the result of an individual’s impairment or disability, but it is as a result of an interaction between an individual and the environment that is not intended or designed

to enable maximum participation. The social model suggests that social, economic, and political practices and systems contribute to disablement, so the attitudes of other people, the lack of proper resources, and the lack of access to services are some of the variables which could hinder people achieving their full educational potential (Department of Basic Education, 2008). Furthermore, according to the social model, the way society interacts with a person with autism can be enabling or can create a barrier to participation (Retief, 2018, p. 29). In educational practice, the system within which a learner with impairments functions can pose barriers to learning rather than the barrier being within the learner as proposed by the medical model (Department of Basic Education, 2008). Just as the medical model has informed the traditional special needs education practices, the social model has informed the inclusive education system (Smith, 2018).

This radical transformation from the traditional ‘special needs’ approach to ‘inclusive education’ approach, according to the Department of Basic Education (2007) meant that all people involved in education need to reflect on how learners should be educated. This includes the districts that support those schools, the professionals who work with educators and learners, educators themselves, and even parents need to re-think attitudes and behaviors. Hence, this also meant a transformation of assessment strategy which was inclusive and based on the social model, thus it is a strategy that accommodated and supported all learners according to their needs and abilities so that they can be rightfully placed, and this strategy is known as SIAS (Screening, Identification, Assessment, and Support) (Department of Basic Education, 2014).

(c) Screening, Identification, Assessment and Support (SIAS)

The aim of introducing the SIAS strategy in the education system is to overhaul the process of identifying, assessing, and providing programmes for all learners requiring additional support to enhance participation and inclusion. One of the key objectives of the strategy is to provide clear guidelines on enrolling learners in special schools and settings which also acknowledge the central role played by parents and educators (Education White Paper 6, p. 7).

According to the Department of Basic Education (2008), SIAS provides a strategic policy framework for screening, identifying, addressing, and supporting all learners who experience barriers to learning and development within the education system, including those who are currently enrolled in special schools. Hence, it is intended to assess the level and extent of support needed to maximise learners' participation in the learning process. Hence, learners in this study are learners with ASD who should be assessed using the social model, thus, entails the inclusive strategy, that being SIAS so that proper interventions and strategies could be utilised in mitigating the vulnerabilities that learners with ASD experience (Education White Paper 6, 2007).

Furthermore, all learners irrespective of their age, race, gender, and disability should be treated equally. All schools and classrooms should operate on the premise that all learners with disabilities are as fundamentally competent as learners without disabilities so that all learners can be full participants in their classrooms and the local school community (McManis, 2017). In light of the social model adopted in the inclusive approach of assessment, I will navigate through the vulnerabilities that learners with autism experience and the intervention strategies thereof, to mitigate the vulnerabilities experienced by learners diagnosed with autism.

3.2.6 Theories that influence Special Needs Education

(a) Humanistic theory

According to Rudy (2019), "Theory of mind" is the human inability to understand what is going on in another person's mind. "Theory of mind" sounds like a complex concept, but in fact, it is usually mastered by children before they are five years old. Although this may be elusive for children and adults on the spectrum, this does not mean that people with autism lack empathy, but rather that it is difficult for them to guess others' intentions and hidden agendas.

According to Rapaport (2017) these challenges include difficulty with reading, subtle facial expressions, and body language, for example, it may be hard for autistic people to intuit whether raised eyebrows are a sign of surprise, fear, or disapproval. Furthermore, vocal tones can also be an issue, for example, we use subtle changes in tone and prosody to express the idea that we are joking, sarcastic and disbelieving (National Institute for Deafness and other Communication Disorder (2020). But when autistic people cannot recognise those subtle changes, they may take jokers seriously, or believe that a sarcastic statement is sincere, thus people on the spectrum often misunderstand other people's motivations or desires (Smith, et al., 2019). They may also fail to communicate information or advocate for their own needs. Difficulty with a theory of mind can also make autistic people more vulnerable to being misled, bullied, or abused (Rudy, 2019). This study relates to that aspect of some of the vulnerabilities that affect learners diagnosed with autism. According to the respondents from the schools, learners with ASD get bullied and ridiculed on the school grounds, which sometimes gets reported and sometimes goes unnoticed. This makes learners become aggressive and thus leads to meltdowns.

(b) Feuerstein's Mediated Learning Experience (MLE)

There are various ways of enhancing learners' learning and development. However, Feuerstein's mediated learning experience seems to be the ideal interactional process between the participants (educators, parents) and the learner diagnosed with autism. Feuerstein and his followers believe that human beings' cognitive functioning can be developed through direct exposure to learning and mediated learning experiences (Fraser-Thill, 2020, p. 8). Furthermore, they purport that cognitive thinking processes and underlying structures can be modified through intervention at any stage during a person's life span. He also suggested that cognitive ability is not completely determined by genetic factors and that it is largely dependent on processes of mediation. This mediation is the design of learning which refers to the pedagogy of the learning, that is, the details of the strategies to engineer learning by the participant to take place with feedback, verification, and encouragement (Chua & Wong, 2016, p. 5). In MLE, the design of learning requires the mediator to be effective in three core areas of mediation - mediation of intentionality

and reciprocity, mediation of meaning, and mediation of transcendence (Tzuriel, 2020). In the mediation of intentionality and reciprocity, the effective mediator will need to leverage an excellent understanding of the learner to devise ways to change the ‘state’ of the learner, rendering him more vigilant and positioning him so that he is more ready for the stimulus (Feuerstein, 2015). The mediator will direct the learner to the stimulus, namely reinforcing specific responses from the learner or catching and holding the learner’s visual attention (intentionality). Then at this stage of reciprocity, the learner and the mediator will have a mutual gaze, namely focusing on the same stimulus (Klein, 2015, p. 265). In essence, the mediator directs or catches the learner’s attention so that he/she reciprocates. After catching attention, the mediator should transform the mental, emotional, and motivational state of the learner to be ready for learning.

Feuerstein and Klein (2015) explain that the mediation of meaning addresses why the learner should bother to pay attention and learn what the mediator wants. It also answers the question of why and what is to happen or to be done. In other words, the learner needs to perceive that the learning activity has personal value with potential for meaningful use. It is my personal observation that many of the school workbooks used, lack the mediation of meaning of the curriculum materials for application into our daily lives. However, there are encouraging signs that more workbooks are beginning to appear to address the need to apply the learning into our daily lives. For example, The Department of Basic Education Blue Books.

Finally, in the mediation of transcendence, the mediator must create opportunities and expose the learner to diverse situations or contexts in life which mandates the application of the learning. This practice provides an opportunity for the learner to appreciate how the same learning unit can be applied under different conditions in a larger, more meaningful, and engaging context (Tzuriel, 2020).

MLE occurs when a more skilled person (teacher, peer, parent, grandparent) assists a child to grasp something that they could not do independently (Feuerstein, 2015). He further amplifies that in the mediation of learning experience, one needs to understand that a

mediator guides the child to discover their own strategy for learning (scaffolding), and the mediator does not tell the child what strategy to use. Hence, the MLE is what occurs in a child's learning zone. This is when we see how Feuerstein's theory lends itself to Vygotsky's notion of the Zone of Proximal Development.

(c) Interpretive-phenomenological theory

The interpretive-phenomenological theory analyses the true experience of people and in this instance, it analyses the real-life experiences of learners diagnosed with autism, including parents and educators' challenges with learners diagnosed with autism. It is an approach to psychological qualitative research with an idiographic focus, which means that it aims to offer insights into how a given person, in a given context, makes sense of a given phenomenon. According to Smith and Osborn (2015), these phenomena usually relate to experiences of some personal significance, such as a major life event, or the development of an important relationship. It is distinct from other approaches, in part, because it combines psychological, interpretative, and idiographic components (Smith and Osborn, 2015). This approach is gaining prominence in qualitative research as it interprets the experiences and perspectives of learners diagnosed with autism and parents and educators' challenges with learners diagnosed with autism (Howard, Katsos & Gibson, 2019).

3.3 VULNERABILITIES EXPERIENCED BY LEARNERS DIAGNOSED WITH AUTISM SPECTRUM DISORDER

According to the National Research Council (2019), children with autism are challenged by the most essential human behaviors, thus experiencing difficulty interacting with other people and often failing to see people as people rather than simply objects in their environment. They cannot easily communicate ideas and feelings, cannot tolerate loud sounds, have great trouble imagining what others think or feel, and in some cases spend their lives speechless (National Institution for Deafness & other Communication Disorders, 2018). They frequently find it difficult to make friends or even bond with family members

(National Autistic Society, 2018). This is due to a plethora of intrinsic and extrinsic vulnerabilities, such as personal, social, and educational vulnerabilities. According to Beth Saggars (2016), learners with ASD present unique challenges, and it is difficult to meet their needs, hence educators, then, need to have a better understanding of autism and how it may affect learning and development, thus this will assist in putting appropriate strategies in place. The vulnerabilities experienced by learners diagnosed with autism will be discussed categorically and possible mitigation strategies will also be provided for educators, hence these mitigation strategies can also be engaged by parents of autistic learners as parents are indeed the primary educators for their Children with ASD.

3.3.1 Personal vulnerabilities experienced by learners diagnosed with autism

3.3.1.1 Transitioning

According to Hale (2018), researchers have noted the manifestations of anxiety in both classic and unconventional presentations, such as transitioning which is fear of change or novelty, worries surrounding circumscribed or special interests, and unusual phobias. He further stated that the thought of doing something or going somewhere new and unknown may cause feelings of anxiety. Underlying anxiety at school can often build throughout the school day and result in different behavior between home and school, consequently, the child or young person is in a familiar environment at home and know they are fully accepted (National Autistic Society, 2017). Children with ASD need extra care that promotes positive emotional health and well-being, including supporting their overall mental health, a positive sense of self, as well as the ability to cope with stressful situations, temper, emotional arousal, overcome fears, and accept disappointments and frustrations (Breiner and Gadsden, 2016). This anxiety and behavior of Children with ASD can be managed by effective planning and transition strategies, thus it pre-warns parents and educators (Sevin, Rieske, Matson, 2015, p. 329-342). Many children with an ASD have a script in their minds for everything that happens in their day, so it is very important to offer a script to explain any changes in advance (Raisingchildren, 2017).

How educators can help

Educators should create a routine in the class that can be clearly understood and is familiar to them, especially using familiar objects and concepts. They require reassurance that things will work out, taking into account their environment and their likes and dislikes (Wright, 2017). According to Geoffrey Nixon (2017), the following strategies can be used for transitioning for learners with ASD and preparing them for change.

1. Sensory/Environment: New sounds movements, uniforms, etc. Too many people take them on a tour when no one is in school.
2. People: Who will be their teacher, assistant, which learners will they know, who to go to for help, getting to know office staff, etc.
3. Visuals: Map of the school with toilets, classrooms, bags, office, library, etc.
4. Video /Film on iPad: Video of the new school, environment, and teachers are wonderful as they can play over and over. Make sure you show HOW the environment looks; for example playground full of students rather than empty.
5. Social Stories/Photo Books: Create social scripts or photo books that show the child's information. Many Asperger's children need "reasons": Why do I have to change teacher? Why do we have to move classrooms? Why can't I stay with my friends? You can create social stories that explain this, and they can refer to.
6. Photos: Class teacher, important staff, toilets, bubblers, etc.
7. Playground: Routines and activities, equipment, games in the playground.
8. Do they want friends? Who do they know already? Clubs they can join.
9. Lunch routine: Practice using lunch box, container, drink bottle, etc.
10. Calendar: Use a calendar to show when their visits will be, and when they will start in the new class.
11. Getting to school: Bus, walk, car. Practice the routine, discuss what to do if late or raining. (Some students are best dropped off right on bell others love morning activities in a playground).

12. Calming Strategies: Ensure the child knows wherein the new environment they can go to calm or access their sensory tools.

3.3.1.2 Sensory Processing needs

According to Cervera (2017), sensory processing/perception (SP) refers to the way the central and peripheral nervous systems manage incoming information from the different sensory modalities, which include the internal modalities of proprioception and vestibular system, and the classical external senses of vision, hearing, taste, smell, and touch which includes all the senses. He further stated that essentially, an autistic child may be sensitive to certain sounds and stimuli which can cause distractions or anxiety. For instance, bright lights or specific sounds may be intolerable for some autistic children.

How educators can help

Educators should speak to the child and/or their parents to determine whether they have sensory perception issues, such as being over sensitive to certain sounds, etc. Once the issues have been identified, the educator and the school-based support team can take steps to eliminate the problems/issues (Help Guide, 2020). Educators should also avoid sensory overload, use visuals, keep the language as concrete as learners with ASD have trouble understanding figurative language, be predictable, treat learners as individuals and model appropriate social skills, and most importantly discuss how our behavior can have an impact on others (Manolis, 2016). Getting to know learners with ASD' sensory preferences can make the difference between frustration and success (Grandin, 2015).

Some sensory needs and solutions that can help learners with ASD (Danneman and Weisee, 2018) include:

Needs	Solutions
1. Proprioceptive Needs: <ul style="list-style-type: none"> • Loves a tight hug or firm touch • Grasps objects too tightly 	Proprioceptive Solutions <ul style="list-style-type: none"> • Provide a pressure or weighted vest, lap pad, or tool

<ul style="list-style-type: none"> • Craves deep pressure and vibration • May appear clumsy • Fears uneven surfaces or stairs/escalators • Prefers jumping or skipping to just walking • Has floppy/low muscle tone 	<ul style="list-style-type: none"> • Provide a ball or wiggle cushion for seating • Use grips for writing • Practice walking over pillows and soft, uneven surfaces
<p>2. Vestibular Needs:</p> <ul style="list-style-type: none"> • Loves to hang upside down • Has floppy/low tone • Craves movement that is fast or intense • Loves to spin • Always in motion 	<p>Vestibular Solutions:</p> <ul style="list-style-type: none"> • Provide a spin disc • Suspend a swing that can be used regularly • Have a trampoline nearby
<p>3. Visual Needs:</p> <ul style="list-style-type: none"> • Avoids bright lights • Shifts gaze to avoid eye contact 	<p>Visual Solutions:</p> <ul style="list-style-type: none"> • Sunglasses are a must • Use a mirror or weighted animal companion to practice eye contact • Make sure wall decorations are soothing and not over stimulating
<p>4. Olfactory Needs</p> <ul style="list-style-type: none"> • Super sensitive to smells like air freshener, coffee, etc. 	<p>Olfactory Solutions:</p> <ul style="list-style-type: none"> • Use more natural deodorisers like essential oils • Use an electric air deodoriser for the room

<p>5. Tactile Needs:</p> <ul style="list-style-type: none"> • Avoids clothing in general • Touches things that are smooth or soothing • Avoids being barefoot or walking on grass, sand, or carpet • Avoids seams and wears socks inside out • Cleans hands a lot • Does not like showers or getting wet • Does not like being touched • Avoids certain textures or textured material 	<p>Tactile Solutions:</p> <ul style="list-style-type: none"> • Buy seamless or tag-less clothing • Provide soft like pellets or cooking flour • Encourage putty play, fine motor games, and use of manipulatives • Suggest chores that use water such as washing dishes • Play outside often and run in the grass, walk on sand, etc.
<p>6. Auditory Needs:</p> <ul style="list-style-type: none"> • Easily startled by fireworks, loud noise, or crashing sounds • Turns volume up on music or TV • Always tapping feet or hands, or likes drumming 	<p>Auditory Solutions:</p> <ul style="list-style-type: none"> • Provide noise-canceling earmuffs • Encourage drum or percussion lessons
<p>7. Oral Needs:</p> <ul style="list-style-type: none"> • Bites • Chews on sleeves, non-food objects, fingers, etc. • Picky eater • Craves spicy, salty, or sour flavors • Does not like textured food 	<p>Oral Solutions:</p> <ul style="list-style-type: none"> • Provide crunchy snacks such as apples, carrots, or celery • Provide a favorite chewy to have on hand • Provide chewing gum • Encourage use of an electric toothbrush or oral vibration device

<ul style="list-style-type: none"> • Does not like brushing teeth or having teeth cleaned 	
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Table 3.1. - Sensory Needs and Solutions

3.3.1.3 Toileting

According to the National Autistic Society (2018), learning to use the toilet, particularly in a way that others see as an appropriate way, can be a real challenge for some autistic children, hence, it is important to recognise that there may be a variety of different reasons for some autistic children finding the acquisition of toileting skills difficult. Some are related to their autism, others related to specific physical difficulties and some a combination of impairments, however, there is very little research evidence to back them up. Consequently, Chesterfield Royal Hospital (2018), provides some possible reasons for toilet-training issues.

1. Lack of understanding - children may not understand that urine or faeces are ‘waste’ material and may believe that they are losing part of their body, so it becomes difficult for many children with learning disabilities to understand that food becomes poo!
2. Gastro-Intestinal Issues - research on gastro-intestinal issues in ASD is varied, but some studies suggest that children with ASD are more likely to have chronic gastrointestinal problems. Problems such as constipation can make going to the toilet painful, so the child avoids this, which then makes constipation worse, hence the child is stuck in a negative cycle.
3. Need for control/routine - Children with ASD need the world to be predictable, and bowel movements can feel scary out of their control.
4. Communication Problems - the child may not be able to let you know when they need to go to the toilet or understand your prompts/attempts to teach them. This can lead to frustration for everybody involved.

5. Motor problems - children who experience some form of delay in the development of their motor skills may not have full control over their bowels and/or bladder. Some children with learning disabilities may never achieve full bowel and bladder control.
6. Lack of social motivation - children with ASD may not understand that toilet training is a healthy and beneficial part of growing up and that wearing a nappy can be socially unacceptable when they are older.
7. Sensory issues - many children with ASD experience significant sensory sensitivities and struggle to manage the sensory input that they receive. This may include a dislike of the noise made by toilets, the sensation of passing urine/faeces, a cold toilet seat, or a preoccupation with water in the toilet (Chesterfield Royal Hospital, 2018)

How educators can help

Teaching learners with autism, toileting skills can be very challenging for educators, however, the only way to overcome this challenge is by working collaboratively to develop a curriculum to help learners with ASD succeed (Saggers, 2016). Furthermore, learners with ASD in this study range on the lower trajectory of the spectrum, thus their cognitive functioning is much lower than other developing learners, hence, visual cues, social stories, and encouragement and rewards will be more appropriate to accomplish this goal (Raisingchildren, 2017). Finch (2020) is a special needs educator who shares some of her strategies.

1. First and foremost, your classroom schedule and routine should be well established with a well-running classroom.
2. Before you start anything with any learner, consult the family and confirm that there are no medical needs for the learner that may inhibit their ability to be toilet trained. A school/district nurse may be a great resource of help. Some learners with health needs may not be ready to be potty trained for reasons out of your control, and this is okay.

3. Create a plan with your team. Everyone should be on board. You cannot toilet train at school if parents are not going to continue at home. If you are going to start toilet training, communication between home and school is also key.
4. CONSISTENCY is key! Once you decide to toilet train in the classroom, you must commit, draw up an individual Education Plan (IEP) and set targets and be consistent, for example, you cannot decide not to “toilet train” today because you are short-staffed.
5. Identify which skills you are going to target. Toilet training has a lot of steps that must be mastered and can be daunting, for example, are learners expected to take their bottoms off? Pull them up? Buttons? Or are you going to work simply on voiding in the toilet? There is no wrong way to do this, but it should be consistent. Once one step is mastered, go ahead, and add some more steps to the mix! It is a misconception that if you are toilet training, the first step they learn must be to take their pants off. Absolutely not! Some learners struggle with fine motor skills and this may set them up for failure. It is okay to assist the child with taking their bottoms off and work with them to void and wipe on their own until they become independent. Eventually, you will get to the point of the child being able to do all the steps on their own. The length of time this takes will differ with each child.
6. Set up the room. The bathroom is just like your classroom, it should be a supportive and learning environment, you can post a visual schedule near the toilet that learners can reference when going to the bathroom., have a visual card handy that staff will be able to use to point to and provide a handwashing visual to help cut down on the verbal prompts while in the bathroom.
7. Equip staff with the tools needed to communicate with the learner while toilet training. Use more visual cues and little verbal prompting as possible as verbal prompts can become overstimulating for learners with ASD.

8. Provide learners with an opportunity to communicate their need to use the bathroom, by providing a visual cue for those learners to communicate the need to go to the bathroom as this is very effective for them to indicate the need to use the toilet. Also have a simple visual in the classroom that staff can use to ask learners if they need to go to the bathroom. This will serve as a reminder for them to go to the toilet. Eventually reduce the cues as they build their routine.
9. DATA/record keeping - Collect data to determine learners' progress! Collect data on learners going to the bathroom. Reward learners making progress, it motivates them. However, sometimes there is no progress, stop the toilet training and revisit it in a few months. It is okay to stop and give it some time.
10. Work on these skills outside of the bathroom. Are learners able to sequence the steps to go to the bathroom? Do they understand what is expected of them? Review these skills before going to the bathroom, by using worksheets and picture sequencing activities to reinforce the toileting programme.

3.3.2 Social vulnerabilities experienced by learners diagnosed with autism

3.3.2.1 Social Interaction and communication

Learners with autism have persistent problems and challenges with social interactions and communication (Saggers, 2016). This may make socialising difficult for them as they may not properly understand the accepted social rules and etiquettes (Belek, 2018, p. 7). Furthermore, the fact that their abilities are starkly different than those of their fellow peers is obvious to them, thus making them conscious and reclusive because they begin to lose confidence in themselves, hence, this results in a higher risk of them being bullied by other learners at school (Jackson, 2015). According to Omar (2018), social interaction is an important part of human development that learners with ASD lack as they may not use their

eyes to attract attention, direct other people's attention or check that they have or do not have the attention of someone else. They also have great difficulty in tuning into the feelings of others thus they lack many skills they need to maintain relationships and friendships (Jackson, 2015).

How educators can help

Educators should encourage other learners to be tolerant, understanding and patient when interacting with autistic learners. To be more inclusive, autistic children can be put in protective peer groups which would encourage social integration and empathy (Valente & Danforth, 2016). According to Jandhyala (2017), if learners are to learn social communication skills, they will need to be in a space where they can listen to and learn from others who are socialising, thus the best way to support learners with ASD in inclusive schools is to include or integrate the learners with ASD so that they can ameliorate the trepidation of social communication skills. Some strategies that can be used according to Raisingchildren (2020) include:

1. Social skills groups/ Peer mentoring - learners with ASD participate in lessons about various social skills topics, within school or classroom. Groups may also include typical peers as models/mentors.
2. Social stories - Children with ASD read short stories. Include pictures of themselves
3. Video modeling - Children with ASD watch videos showing themselves or peers demonstrating specific social skills, and then practice the skills.
4. Picture books - Children with ASD look at photographic sequences of social skills to learn how and why to perform the skill.

3.3.2.2 Stereotypes and discrimination

The Equality Act 2010 Guidance for schools, states that a person has a disability if “they have a physical or mental impairment which has a long term and substantial adverse effect on their ability to carry out normal day-to-day activities.” According to the National

Autistic Society (2020), Mental impairments is a lifelong disability that affects how people perceive the world and interact with others, such as autism. Most people with autism are likely to fit this description, however a person does not have to have a diagnosis to be considered disabled (Centre for Disease Control and Prevention, 2019). There are several types of disability discrimination that learners diagnosed with autism may experience, such as direct or indirect disability discrimination, a failure to make reasonable adjustments, bullying, harassment, and victimisation (National Autistic Society, 2019). Another form of discrimination is racial discrimination which often results in bullying and racist bullying ranging from ill-considered remarks, to physical attacks causing serious injury (State Government, 2017).

How educators can help

According to Wing and Gros (2018), educators can eliminate these stereotypes and discrimination in classrooms and schools *per se* by using the following strategies:

1. Create a welcoming environment free from bias in your discipline - as educators, set a tone in classrooms, and only allow learners to act in the way that you allow them. Creating an environment free from judgment and free from bias is the responsibility of every educator. This occurs through what is said and what is seen. For example, give a brief explanation to the learners about certain learners having certain challenges, so that that they become more accommodating and understanding to individual needs.
2. Be diverse in what you teach and read - your classroom materials should be a mirror for your learners in which they can see themselves represented, hence, expose learners to multiple perspectives and people because it teaches them empathy and diversity.
3. Honor multiple perspectives in your classroom - as a society, we tend to only want to hear from those who agree with us. However, we need to foster an environment where learners can hear from others who may not hold the same views as them, and we must allow them to feel safe in doing so.

4. Have courageous conversations - when we reflect on our biases and create safe spaces in our classrooms, we create opportunities for powerful conversations and understanding with our learners. We are likely to have eye-opening, perspective-shifting moments whereby learners often admit their discriminating behaviors and ultimately become apologetic and view their peers' abilities rather than their disabilities.

3.3.2.3 Bullying, Victimization, and Stigmatisation

According to the South African Schools Act 84 of 1996, a person is bullied when he or she is exposed repeatedly to negative actions on the part of one or more other persons, and he or she has difficulty defending himself or herself. The three main elements thereof are, bullying is a form of aggressive behavior where the bully acts out and behaves negatively, bullying forms a behavioral pattern over time, and bullying results from a power imbalance, thus this leads to victimisation and stigmatisation of learners, especially learners with barriers to learning (Boezaart and Laas, 2014). Hence, learners diagnosed with ASD are often reported by parents and educators to be bullied by peers during their school years (Hebron, Humphrey & Oldfield, 2015). Vulnerability to bullying is perhaps the result of learners with ASD being socially withdrawn, which often leads to isolation and loneliness that continues into adulthood (Hebron, 2015). Such isolation then increases the risk of peer victimisation, as many of them don't have the support and protection of their peers (Mandell, 2016). Furthermore, their socio-communicative and behavioral difficulties, as well as difficulties with peer interactions, could lead individuals with ASD to experience increased rates of peer victimisation, bullying, and ostracism (National Institute of Health, 2018). Also, learners diagnosed with autism get bullied, victimised, and stigmatised because of the impairments in social understanding, interaction, and communication (Maiano et al., 2015).

Science News (2018) reports that researchers indicate that there is a prevalence of learners with ASD being frequent victims of bullying with victimisation rates increasing daily.

Some of the factors related to the victimisation of learners diagnosed with ASD include individual (i.e., characteristics of ASD, social vulnerability, behavior problems, disability, race, academic achievement, and age of learner) and contextual (i.e., educational setting, school transportation, parental mental health, parental engagement and confidence, family socioeconomic status, and social support from peers and friendship).

How can educators help

Educators must have class discussions and assembly talks about school discipline, adopt a code of conduct comprising a set of rules which sets the standard and tone for learner behavior, and encourage self-discipline and mutual respect, hence, it must outline positive behavior but also indicate how misbehavior will be dealt with (Boezaart and Laas, 2014). The South African Schools Act 84 of 1996 outlines that a code of conduct should provide a regulatory framework within which a safe, secure and disciplined learning environment must be established. Educators must emphasise what discipline entails so that learners are taught confidence and self-control, thus mitigating the bullying, victimisation, and stigmatisation at schools (Earnshaw, et al., 2018).

3.3.2.4 Physical and Sexual abuse

Vulnerability to physical and sexual abuse is perhaps related to IQ and the inability to detect the intentions of others (Jackson, 2015). According to a study by Davis (2019), a child with any type of intellectual disability is four times more likely to be physically and sexually abused than a child without disabilities. Parents feel uncomfortable and anxious about teaching their children about sexuality, especially children with autism. Some parents feel that it is less important to teach young adults with autism about sexuality with the assumption that it is unlikely to become a part of their lives. This is not the case. In fact, sexuality education from parents is very important for people with autism because they are unlikely to learn about it from their peers, movies, or other similar sources. People with

autism must know the difference between appropriate and inappropriate behavior and distinguish between the various types of healthy relationships (Davis, 2019).

How can educators help

The individual development and understanding of young people with ASD make it difficult to provide general rules about how sex education should be taught, however, all methods or approaches will need to be adapted to individual perception and needs (Saggers, 2016). Comprehensive Sexuality Education (CSE) has positive effects on sexual knowledge, attitudes, communication skills, and certain sexual and physical behaviors (Vanwesenbeeck, 2015). Generally, the approach to sexuality education should follow on from the educational approaches used in all other areas of learning such as, clear language, visual cues, making time for sexuality education, difficult behavior and safety (National Autistic Society, 2019, p. 9). Each of these areas will be discussed briefly to give educators and parents guidance on mitigating the physical and sexual abuse of learners with ASD:

1. Clear Language - Use the correct names for private body parts from early childhood. Ensure that the educator and parent discuss this so that the same words are used to cascade information, also reinforce, and repeat keywords (or signs) relating to sexuality at the appropriate place and time. For example, use the word “private” when using the bathroom or toilet and (if possible) teach the learner or your child to shut the door when they are using the toilet. This highlights the need for good communication between school and home so that learning can be reinforced in different contexts.
2. Visual Cues – learners with ASD are often visual thinkers. This makes pictures and signs an important way of making communication easier and pictures or signs are not just for children or learners with little or no speech. Pictures and signs will help communication and understanding for all children or young people with ASD. Pictures of signs can be used alongside language or as a means of communication on their own, however, these pictures and signs need to be age appropriate.

3. Making time for sexuality education – educators can create a specific time slot in the week for teaching sexuality education. This means that educators can be proactive and introduce themes and areas they feel young people need to learn about, rather than responding after the event or to a crisis. Relationship and sexuality education should continue as the child grows older and should not be limited to one age group. It is important not to give more information than the child needs at that time. For the parent, the timing of sexuality education can be more difficult, however, bath time is a time for learning about body parts and personal hygiene and for the older child or learner, bath time or bedtime can be a time where it may be possible to reinforce age-appropriate independence and the concept of privacy.
4. Difficult behavior - When we think about sexuality, it is tempting to place sexual behavior or development into one of two categories: “normal” or “abnormal”. This is because we are conditioned to think about sexuality in two ways: “good or bad”, “normal or abnormal”, thus this kind of thinking often means that, if someone has a disability, including autism, their sexuality is more likely to be judged negatively simply because of their disability, however, we must remember that it is non-autistic people who define whether a behavior is inappropriate or difficult but for an individual with ASD, certain behavior may have “a very significant and specific meaning which is not ‘just being rude’ or sexually motivated”. Consequently, we need to try to understand the reasons for different behavior rather than simply interpreting behavior as sexual, difficult, or abnormal.
5. Safety - In mainstream education, sexuality education is included as part of the curriculum in the learning area of Life Orientation. It is not necessary to gain parental consent to teach sexuality education, although many schools value the need to inform parents what is taught and when, because of legal concerns of sexual abuse. However, the law gives people with “mental impairment” special consideration in acknowledging their increased

vulnerability to sexual abuse. Mental impairment is defined as “any mental impairment regardless of its cause” thus this means that in special schools, including schools for learners with ASD, extra consideration needs to be given to how sexuality education can be taught in a way that is safe and accountable.

3.3.3 Educational vulnerabilities experienced by learners diagnosed with autism

3.3.3.1 Cognitive Processing Delays and communication

According to the National Institute on Deafness and other Communication Disorders (2020), the intellectual and social development of children diagnosed with ASD will determine their communication and language use. It was further ascertained that some children with ASD may not be able to communicate using speech or language, and some may have very limited speaking skills. Moreover, they may experience difficulty in understanding body language and the meanings of different vocal tones, thus causing cognitive processing delays. They also experience difficulty grasping questions, facts, and ideas, however, this should not be confused with their level of intelligence (Zeliadt, 2018). Learners with communication and speech challenges can pose huge problems and obstacles with social, as well as achieving learning outcomes, consequently, such learners need love, encouragement, and support. Positive reinforcement can help ensure that they emerge with a strong sense of self-worth, confidence, and the determination to keep going even when things are tough (Help Guide, 2020).

How educators can help

Educators need to realise and be cognisant that cognitive processing or learning disabilities are not insurmountable. Educators should keep things in perspective by allowing learners diagnosed with autism extra time to process their thoughts and ideas, avoid putting them on the spot to answer questions, instead encourage them to participate when they are ready and have formulated their thoughts (Help Guide, 2020). Also identify if the learner is a

visual learner, an auditory learner, or a kinesthetic learner and once you have figured out how they learn best, you can take steps to ensure that, that type of learning is reinforced, and communication is encouraged in the classroom and at home (Geer, 2017).

3.3.3.2 Difficulty focusing

One of the many symptoms associated with autism is the inability to focus due to developmental delays, thus causing autistic learners ‘spacing out’ in class and not understanding or remembering what they were taught (Saggers, 2016). This can make it very difficult for them to complete assignments and prepare for tests, also they find it hard to focus on things that do not interest them, for example, activities that involve shared attention, like reading a book with a caregiver, doing a puzzle, or even walking safely across the road (Raisingchildren, 2017).

How educators can help

Educators should decrease the number of verbal instructions, instead give learners short, written, precise instructions and eliminate, as much as possible distractions from the classroom. Also, follow a structured learning plan and use play to build attention or focus (Raisingchildren, 2017). Hence, according to AngelSense (2020), the following strategies can also enhance their ability to concentrate and focus:

1. Teach the learner to make eye contact

Learning to make eye contact is an important skill and something that may help your child pay attention to what is outside their realm of interest. This can take some time but be patient and break the process down into fun, game-like steps that your child can enjoy, for example, call your child’s name and place a favorite toy within their line of sight, gradually move the toy towards your eyes, thus the learner will eventually have to look you in the eyes to look at the object, hence with enough practice, the learner will begin to look you in the eyes when you call their name.

2. Engage the child in activities of interest

Playing with the child is an effective and rewarding way to develop the child's ability to focus. It is important to only choose activities that the child enjoys and finds interesting. Ideally, this should be an activity that involves other people, so your child gets to interact and focus on something, for example, pick a fun and interactive activity the child enjoys, such as a ball.

3. Make close-ended activities a priority

When developing the child's ability to concentrate, engage the child in short activities with a daily goal. This will help keep the child motivated and will prevent the child from losing interest in the activity, for example, pick a close-ended activity like threading beads on a necklace. Once the child has mastered a simple close-ended activity, increase the difficulty, however, be sure to praise the child as soon as they complete the task.

4. Repeat what the child says and does

A good way to make the child more aware of their actions and to help them focus on interaction is to repeat what they say and do. This should not only attract the child's attention but may make the child curious to see what you do next. The idea is that this should turn into a game where you both take turns imitating each other. For example, copy the child's actions like facial expressions, body language, gestures, and language and once you have got the child's attention and they are expecting you to imitate them, change things up by doing your actions, hence encourage the child to copy you.

5. Praise the child for paying attention

When you notice the child concentrating, be sure to reward them. The important thing is not just to praise the behavior, but to be as specific as possible. You want the child to know you are proud because of something

that they did. Compliment the child with phrases such as ‘great job’ or ‘well done’.

3.3.3.3 Motor Skill challenges

According to Weider (2018), motor development in autistic children has been the subject of studies for years, as autism is a neurological condition without any defining physical characteristics. Differences in brain functioning in autistic children are not easy to detect, and professionals often observe behavioral patterns such as those exhibited by the development of motor skills (National Health Institute, 2018). Motor skill problems and challenges involve a child not being able to perform tasks that come easily to other learners, such as fine motor skills (such as holding a pencil and writing properly) and gross motor skills (such as participating in physical education classes) (Saggers, 2016).

How educators can help

Educators should not get learners with ASD to write lines thinking this will somehow improve their handwriting. Moreover, this approach seems more punitive and in many cases is counterproductive. Learners should be encouraged to work on their handwriting according to their own pace and consider the use of computers if writing is difficult to grasp (Saggers, 2016). If their motor skills activities become challenging, it is important not to force them to do it, rather consider developing a physical education programme or schedule which will focus on problems with motor functions, thus encouraging learning through play and repetition (Raisingchildren, 2020).

Furthermore, Rain (2020) states the chunking approach can be appropriate to break down tasks into small steps. Once a task is mastered, the child moves to the next goal, thus the child achieves success in small increments, each building on one another and this method applies to gross motor, fine motor, and speech therapy.

3.3.3.4 The trouble with the Standard Curriculum

Each child with autism displays different symptoms and suffers from different setbacks and challenges, thus each child with autism is unique and must be addressed and taught in a manner that benefits them specifically (Jackson, 2015). Hence, in many instances, the standard school curriculum developed for learners is not suitable for children with autism, thus this exacerbates their stress, anxiety, and in some cases depression (Saggers, 2016).

How educators can help

Educators should make concessions for autistic learners, bearing in mind that their rate of learning may differ from their other learners. There should be extra time devoted for possible remedial classes, in which one-on-one instruction and assistance are given to the child by designing specific learning outcomes which are tailored to help children learn better and quicker (Jackson, 2015). Also understand the learner's particular learning style, for instance, do they respond more to visuals? Hence, this will help you in teaching learners with ASD (Manilis, 2016). Learners need to be supported and guided by utilising the multimodal learning styles so that they can understand and remember more, for example, use games and activities that will enable their learning to become practical thus making learning easier to grasp (Myres, 2020).

3.3.3.5 Barriers to learning and development

Barriers to learning and development are anything that stands in the way or makes it difficult for a learner to learn and/or develop effectively and to participate fully in the curriculum (Oliva, 2016). According to the Department of Education (2014, p. 13), learners are often faced with challenges in the learning process that are a result of a broad range of experiences in the classroom, at school, at home, in the community, and/or as a result of health conditions or disability. Some of the contributing factors are attitudes, inflexible curriculum implementation at schools, language and communication, inappropriate and inadequate provision of support services, lack of parental recognition and involvement,

disability, lack of human resource development strategies and unavailability of accessible learning and teaching support materials and assistive devices. Hence, the learning and development of learners with ASD are further exacerbated as they develop at a different rate and do not necessarily develop skills in the same order as typically developing learners, thus making it more difficult to grasp concepts and skills (Raisingchildren, 2020).

How educators can help

According to Feuerstein, a well-known Israel clinical development and cognitive psychologist believed that every individual could learn despite his/her disability, impairments, race, etc. This process is known as Mediated Learning Experience (MLE) , whereby learners gain intervention via human mediation, a fundamental shift in how the learner is taught to process and interact with information across all aspects of their lives, which is called the (Brittingham, 2019, p. 43). Keeping Feuerstein’s theory in mind, a myriad of different approaches can be employed that have been proven to yield positive results, and while it must always be remembered that every learner’s needs are unique, there is no need to reinvent the wheel every time you work with a different child (Saint Joseph’s University, 2020).

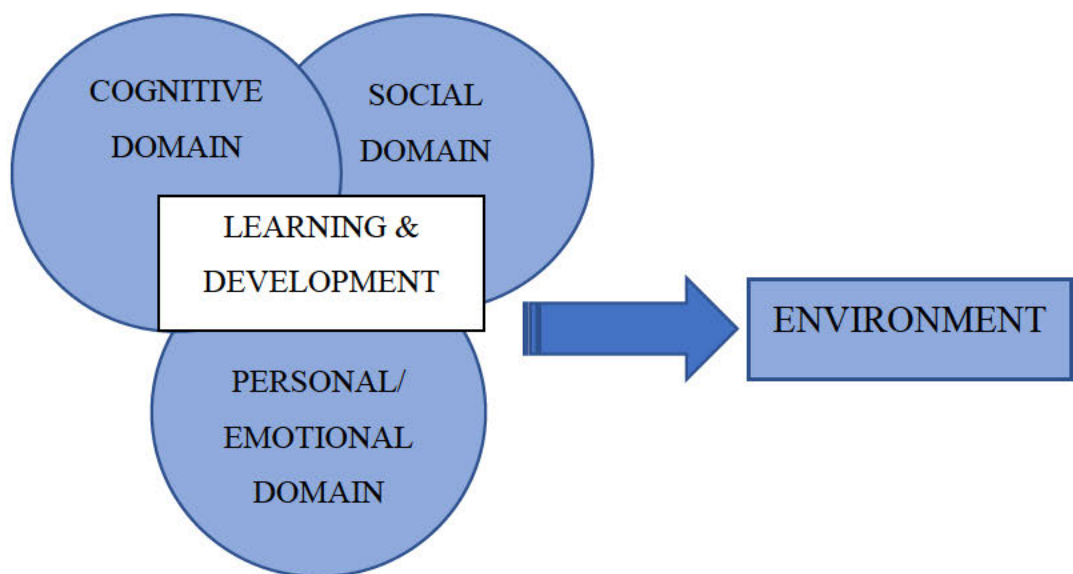


Figure 3.2: Feuerstein’s theory of Learning and Development

Feuerstein's theory of Learning and Development has been adapted from Fraser-Thill (2020, p. 8). According to Feuerstein's theory, there are five MLE criteria, namely Intentionality and Reciprocity (e.g., focusing, alerting, and changing focus based on reciprocity of learner), Meaning (e.g., provision of effect and importance), Transcendence (e.g., expanding information by teaching principles and rules beyond the concrete information), Feelings of Competence (e.g., rewarding, interpreting successful performance, preparing conditions for success), and Self-Regulation (e.g., monitoring impulsive behavior, sequencing order of activity) (Tzuriel, 2020). He further stated that the development of the mediational approach to learning is associated with Vygotskian sociocultural theory, namely the use of scaffolding and Zone of Proximal development is used to guide learners temporarily to internalise information by using a variety of strategies and approaches.

1. Use simple concrete language - Simple, concrete language, especially when the words used are visual and accompanied by visual supports, is easier for learners on the spectrum to interpret than abstract or metaphorical language. Unadorned, straightforward, literal language is more readily understood, which is why it is also best to avoid using idioms, sarcasm, and long sentences.
2. Give limited clear choices - For many learners with ASD, choosing can become nearly impossible when given a wide range of options to consider. Likewise, choices that have nuances can provide an unwelcome and unwinnable challenge. For example, if working with a child on identifying which shape is called a "triangle," only give him or her two or three options from which to choose.
3. Be gentle in criticism - Like all children and adolescents, autistic learners need honesty, guidance, and feedback regarding when they are doing tasks correctly and when they are not, but it is important to always be gentle in tone and word when offering correction or critique. The tone of voice,

because of the shifts in meaning it can convey, causes considerable difficulty for anyone on the spectrum. Even in non-tonal languages, elements of speech like pitch, pace, and inflection can all transform the meaning of a sentence. Therefore, when offering criticism, a gentle, regular tone must be used. An angry or loud tone will cloud meaning because the heightened volume and energy will often obscure what you are saying.

4. Applied Behaviour Analysis (ABA) - ABA is a systematic approach that assesses and evaluates a learner's behavior and applies interventions to try and alter behavior. From understanding a behavior's function to controlling the learner's environment, ABA is successful in shaping learners' behavior. Some elements of Applied Behavior Analysis include intervention designed by a trained behavior analyst, development of treatment goals that emphasise achieving greater independence for the student both now and in the future, training for parents and caregivers so ABA can be continued in the home, and abundant positive reinforcement for desired behaviors.
5. Solve sensory problems - Behavior problems in learners diagnosed with ASD often come after an experience of sensory discomfort that can include the range of senses. From the hum and pulse of fluorescent lighting to the whispering that takes place at times among other children in the room, learners on the spectrum can struggle with sensory experiences that impede them from participating in a classroom's objectives, behaving as desired, and learning. When a child with ASD undergoes a marked behavior change, look for a sensory source of the problem first.
6. Discrete Trial Teaching (DTT) - Also known as the Lovaas Model, DTT uses positive reinforcement to focus on changing skills and behaviors by breaking each one down into smaller steps that are taught along with prompts until the learner masters the steps required to perform a particular skill or behavior.

This section explored the vulnerabilities experienced by learners diagnosed with autism. It included personal, social, and educational vulnerabilities, some were intrinsic and some extrinsic. Hence, some strategies were also outlined under each category so that educators and perhaps parents, being the primary educators for their Children with ASD can engage, to ameliorate the vulnerabilities that learners with ASD experience. The next section explores educators' experiences and challenges teaching learners diagnosed with autism.

3.4 TEACHERS EXPERIENCES AND CHALLENGES TEACHING LEARNERS DIAGNOSED WITH AUTISM

3.4.1 Curriculum

Curriculum for learners diagnosed with autism entails communication, thinking and social interaction skills that need to be explicitly taught, supported, and structured (Saggers, 2016). During the planning of the curriculum content, teaching and learning process including monitoring and assessment, strategies need to be adapted according to learners' individual needs and abilities (Australia State Government, 2018). All learners on the autism spectrum require personalised planning and support around their learning goals, which may include communication, socialisation, and thinking goals, hence a proper curriculum is essential in this process (Hammond, 2019). Furthermore, the curriculum needs to include structured teaching approaches and methodologies (Research Autism, 2018).

However, since the advent of democracy in 1994, South Africa has introduced several educational reforms such as Outcomes-Based Education (OBE), National Curriculum Statements (NCS), and Curriculum and Assessment Policy Statement (CAPS), hence, these educational reforms were in response to inequalities and imbalances in the education system, which were created by the apartheid government, thus this reform significantly changed the teaching methods from teacher-centered to learner-centered (Maharajh, Mkhize & Nkosi, 2016). In this context, the implementation of the Curriculum and

Assessment Policy Statement (CAPS) was an important step in achieving educational reforms especially special needs education as discussed in the section on inclusive education, however, CAPS has been plagued by challenges (Churr, 2015, p. 5). The challenges educators face are the curriculum changes and the lack of clear technical expertise to carry out teaching responsibilities, hence, educators often lack the theoretical knowledge and familiarity with principles informing the implementation of curriculum change (Maharajh, Mkize, and Nkosi, 2016). However, according to the Department of Basic Education (2015, p. 34), the implementation of the White Paper 6 aimed to eradicate some of the challenges as there were serious concerns about the standard of curriculum delivery in special schools. There was evidence that many were simply daycare centers with little attention being given to ensure that learners had access to the curriculum (Department of Basic Education, 2015, p. 35). Consequently, as part of the turn-around strategy for special schools, the Department of Basic Education endeavored to provide training to educators and allocate subject advisors to monitor the curriculum delivery at special schools however, the same support was not given to special schools. In essence, there was very little to no monitoring at schools, thus leaving the special schools with no curriculum for learners with ASD *per se*, thus educators had to adapt the CAPS curriculum to suit individual learners needs and abilities to meet learners with ASD' diverse needs and strengths (Centre for Autism, 2020, p. 2).

3.4.2 Classroom organisation and provision of support in the classroom

According to Chiang (2017), the physical learning environment can significantly impact the teaching and learning process. It is important to reduce as many barriers as possible to ensure learners acquire the necessary skills, goals and outcomes in a predictable and calm environment (Brittingham, 2019). Hence a precise analysis of individual learning needs is necessary to understand learner's motivation and preferred ways of working (Saggers, 2016). It is therefore important to plan strategies, namely places and times for breaks to assure learners that they are supported in their quest (Jackson, 2015). However, educators are faced with an array of challenges regarding classroom organisation and provision of

support in the classroom which impacts the teaching and learning of learners with ASD (Efthymiou, Kington, Lee, 2017).

(a) Overcrowded classrooms

According to Bailey (2018), parents want educators to address the individual needs of their Children with ASD and educators also want the same, however, it is difficult to fulfill that when classrooms are overcrowded. Hence, although educators endeavour to adapt their teaching to address the individual needs of their learners with ASD, classrooms become larger and more diverse, thus becoming increasingly more onerous to achieve their goals and outcomes (Saggers, 2016). Furthermore, with classes being overcrowded, educators must bear the brunt of behavioral and social issues, sensory issues considering the noise factor in class, and cognitive challenges, thus making it difficult for educators to cope (Akes, 2016). In March 2013, a document entitled *Policy Brief* (Modisaotsile, 2012, p. 2) requested better teacher training to address teaching challenges, one of which is overcrowded classrooms, thus this document aimed to improve the untenable situation at schools however, it failed to meet the needs of learners and educators (Marais, 2016, p. 9). Learners with ASD require individualised attention to meet their daily demands and needs, however, the overcrowding in classrooms impacts on meeting educational outcomes (Saggers, 2016). Consequently, this negative impact on classroom provision is largely related to the lack of funding and human resources at schools (Department of Basic Education, HRM Circular No. 41 of 2012).

(b) Funding and resources

According to Saggers (2016), funding is critical in individualizing learners with ASD' needs especially the amount of resourcing, support, and specialist staff available to teachers which promotes the teaching and learning approach. Funding and resources vary from school to school. Children and young people with additional health and developmental

needs (AHDN) often require extra support at school to reach their full potential, such as class assistants and therapists (Jackson, 2015).

One condition among children with AHDN is ASD, hence an ideal funding model emphasises learner functioning rather than diagnosis, supports early interventions, responds to changing needs over the schooling life, involves families, supports multi-disciplinary teams, and utilises existing education and support resources (O'Connor, et al., 2015, p. 7). learners with ASD in this study range on the lower trajectory of the spectrum, thus funding and resources have a huge impact on the teaching and learning programmes, hence it also contributes to the learners with ASD' learning and development (physical), and social-emotional behaviors (O'Connor, et al., 2015, p. 10).

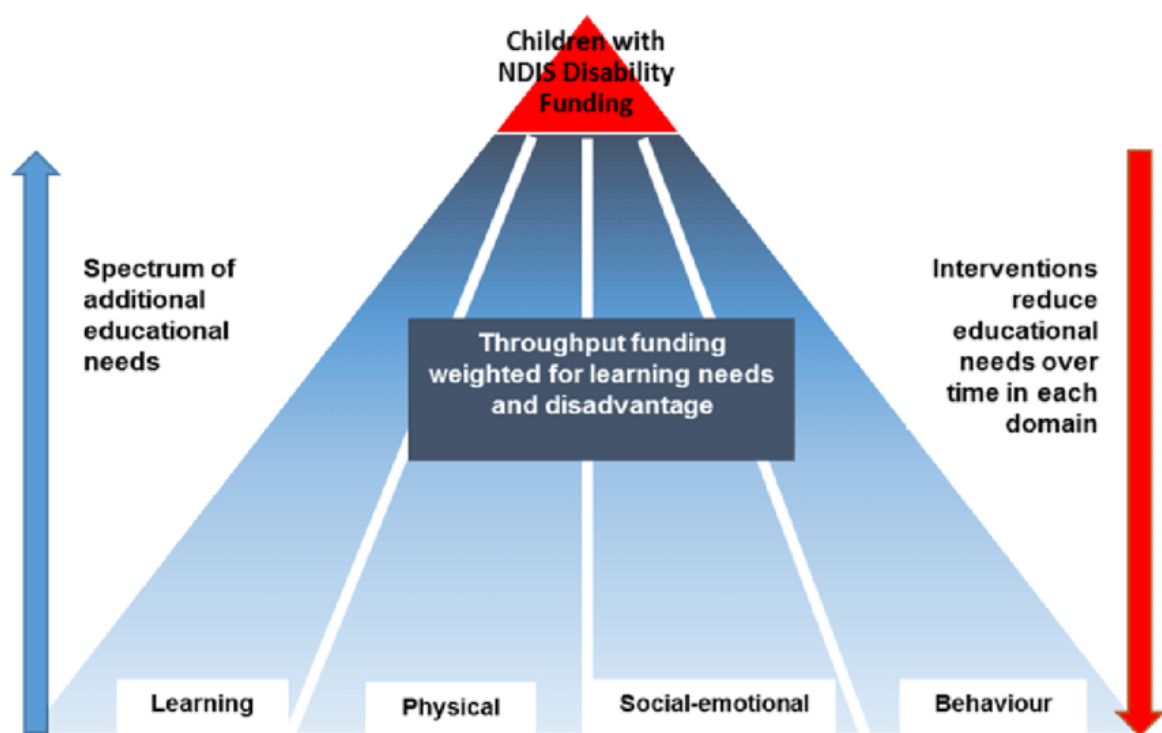


Figure 3.3: Approach to supporting the spectrum of learning needs for students with AHDN (O'Connor, et al., 2015, p. 10)

To ensure all learners reach their educational potential, a different approach to the way existing funds is used is required, one with greater efficiency and effectiveness to optimise the use of current resources, thus the Department of Basic Education (2019), makes an allocation of R200 000 for learners with an autism spectrum disorder. These funds ought to be utilised for the resources for learners with ASD to enhance their learning and development, however after audits from the Department of Basic Education, it seems that some schools have not utilised these funds for their core purpose (Special Needs Education Service, 2019). This poses a huge challenge to educators to fulfill their full potential. Furthermore, learners with ASD require additional support and care to meet their individual needs and demands (Saggers, 2016), however, schools are under resourced in many areas particularly in human resources (Mupa and Chinooneka, 2015). The Department of Basic Education placed a moratorium on the employment of support staff at schools, such as class assistants and therapists, thus this impacts negatively on classroom delivery (HRM Circular No. 41 of 2012), hence, this is in direct contradiction to White Paper 6 (Department of Basic Education, 2001a) and the strategy for Screening, Identification, Assessment and Support (Department of Basic Education, 2001). Educators are faced with the dilemma of needing additional help from appropriate specialist staff to put adjustments in place that fit within the context of their classroom and school (Saggers, 2016).

(c) Sensory rooms

According to Ray (2017), a sensory room is a therapeutic space with a variety of equipment that provides learners with special needs with personalised sensory input which helps these children calm and focus themselves so they can be better prepared for learning and interacting with others. Schools can be noisy, busy places, thus for learners with ASD, the sheer volume of stimuli can all get too much, making the school environment a stressful and disturbing place at times (Green Modular, 2020). The creation of sensory rooms in schools is a practical and effective way to provide calming and safe spaces for pupils with autism and other special educational needs (Bell, 2019). Changing the environment can often reduce behavioral episodes (Autism Speaks, 2018). KwaZulu-Natal Department of

Basic Education (2020) has 72 special schools, unfortunately, only 14 schools have sensory rooms to cater to the needs of autistic learners, which exacerbates the challenges in class (Luthuli, 2019).

3.4.3 Teacher training and development

Structured and explicitly communicated teaching approaches is essential in teaching learners diagnosed with autism spectrum, including the presentation of tasks, timetables, and learning environments. This structured teaching approach needs to be clear and systematic and as far as possible it needs to be supported by appropriate visual materials (State Government of Victoria, 2019). In a study by Groot, Visser, and Lubbe (2015), it was found that teachers reported a lack of personal development and a need to know how to understand and address different barriers to learning in the classroom. According to Saggars (2016), for teachers to accommodate the individual needs of a learner with ASD they need to constantly improve the skills and knowledge that will assist them in the development of such children's strengths and competencies as well as in dealing with the behavioral, sensory, emotional, communicative, and social balances.

3.4.4 Developing social and communication skills

Children and young people on the autism spectrum often do not develop social and communication skills in the same way as typically developing learners. This can be the most challenging yet most rewarding task for a teacher to achieve at it determines the functional success of every other goal (Chiang, 2017). Through my years of experience and involvement with learners with ASD, I have found that learners diagnosed with autism often find great difficulty in social situations. What comes naturally to most children does not come naturally to children who have ASD. Lack of social skills makes it difficult for these learners to make and keep friends and can lead to social isolation. I therefore used a variety of strategies to teach social interaction to learners diagnosed with autism.

Firstly, I teach learners to recognise the feelings of others by using picture cards, magazines, and sign language to point out facial expressions, thus teaching them what each facial expression is and what it means. Secondly, I engage with learners with ASD who have very one-sided conversations, then I teach reciprocal interactions. They often talk about their favourite subject and fail to ask questions to the person they converse with and fail to acknowledge the interests of the person that they converse with (Gailes, 2017). Practicing turn-taking and getting them to ask questions helps learners with ASD maintain a conversation. Thirdly, I use simple social stories that are related to a situation that learners with ASD will be confronted with so that they will know what to say in that situation. According to Autism Speaks (2018), to mitigate the socialisation and communication challenges of learners with ASD, one must consider the social development of the learner which consists of a range of skills, including timing and attention, sensory integration, and communication, that can be built and layered to improve social competence and communication.

Some strategies that can be used to develop socialisation and communication in learners with ASD include:

- Model social interaction, turn-taking, and reciprocity.
- Break social skills into small components and teach these skills through visual cues.
- Identify peers who can model strong social skills and pair the learner with them. Provide peers with strategies that will elicit communication and other targeted objectives as naturally as possible.
- Reinforce what the learner does well socially - use behavior-specific praise (and concrete reinforcement if needed) to shape pro-social behavior.
- Teach imitation, motor as well as verbal communication.
- Teach context clues and referencing those around you, for example, 'if everyone else is standing, you should be too!'.
'
- Celebrate strengths and use these to your advantage. Many learners with autism have a good sense of humor, a love of or affinity for music, strong rote

memorisation skills, or a heightened sense of color or visual perspective. Use these to motivate interest in social interactions or give a learner a chance to shine and be viewed as competent and interesting (Autism Speaks, 2018).

3.5 CHALLENGES FACED BY PARENTS

According to Sarris (2019), most parents experience stress, but for those raising children with autism, everyday life often brings '*Stress*' with a capital S. He further stated that parents have daily demanding tasks, such as, they need to manage their children's meltdowns, keep their child from running away, wrangle with educators about special needs education, avoid sights or sounds that overload his/her senses, and drive to therapists or doctors. They do all this while sleep deprived as many children with autism simply do not sleep well, so neither do mum and dad (National Autistic Society, 2019). Those 'sleep deprived' and frustrated parents often have unrealistically high expectations of their children, whether learners with autism are included in a mainstream educational setting or supported in a special school. This could raise questions about the impact of autism on the parents (Raisingchildren, 2017).

My research is common to many researchers who have noticed that parents of children with autism experience higher stress levels than parents of typically developing children. The stress of receiving the child's diagnosis may affect parents of a child with autism differently from parents of a child with other developmental disabilities. This could be as a result of children with autism being born without any indication of behavioral, physical, or intellectual abnormalities (Sarris, 2019). This could lead to parents having 'normal' expectations for the child, leading the parent to place undue expectations on the child and the educator. Parents of children with autism indirectly must deal with the stress of losing their previously 'normal' child (Mubaiwa, 2019).

The child may furthermore be seen as 'imperfect' or 'defective' and needing to be 'fixed' or even be considered as a burden or a threat to the family (Sarris, 2019). The age of the child

and the child's level of functioning also contribute to stress in parents. The more severe the child's symptoms of autism, the higher the level of stress felt by the parent (Carrim, 2019). Parents of children with autism are also more likely to have fewer friendships, and little family and social support. Recent studies on the anxiety levels of parents of children with autism compared to parents of children with other disabilities evidenced significantly higher anxiety in the parents of children with autism (Sarris, 2019).

(a) The transition of learners diagnosed with autism

According to Gaigg et al. (2018) learners with autism experience difficulty with the unknown and fear the unpredictable which increases their anxiety levels. It is difficult for them to absorb the information presented by a new situation, determine what the expectations are, and then generate appropriate responses (Summerson-Wright, 2016). Hence, since transitions are often difficult for them and may result in increased anxiety and inappropriate or resistant behaviors, it should be carefully and thoughtfully planned (Haelle, 2018). This includes transitions between activities and settings throughout the day, into the school system, from one grade to the next, from one school to another, and adult life. It is not possible to provide a programme and environment that is free from transitions and free from change, as this is a part of life (Raisingchildren, 2017). The goal is to help the learners cope with changes and adapt to a variety of settings (Autism Speaks, 2018). Recognising early signs of behavioral problems can often decrease anxiety and inappropriate behaviors by using proper approaches, including preparation for change and transition, to calm situations and behavioral outbursts (Autism Speaks, 2018).

(b) Transition into the school system

According to Kupper (2017), typically, parents of a child with autism notifies the preschool of their child's special needs before their formal registration period. Schools and parents should plan well in advance for the child's entry into school. In some cases, a child may have been in a preschool and parents may have already acquired a range of support services

before formal schooling. Parents often seek reassurance that the child's support from the preschool years will continue in their formal schooling (Breitenbach, 2015, p. 7).

They may need assistance in understanding that there may be differences between previous services and school-based support teams. A school-based support team meeting including school staff, parents, and professionals who have been working with the child, such as the supported child-care consultant, can be arranged to help convey important information about the child. This will ensure that the family's goals are communicated to the school and will help the school district to plan resources for the next school year. If any documents are transferred to the school by those currently working with the child, the parents must first sign a release form so that professionals can share this information. Parents may want to visit the classroom and talk to the educator ahead of time. For some children, a visit or several visits to the new setting may be appropriate, so that they can begin to become familiar with the new environment, however for some children, a gradual introduction to school may ease this challenging transition (Holsted, 2015, p. 16).

3.6 PLANNING OF INDIVIDUAL EDUCATIONAL PLANS (IEPS)

Autism Society (2019) states that the Individualised Education Plan (IEP) is a written document that outlines a child's education, such as the educational programme which should be tailored to the individual learner to maximise his/her potential. The keyword is individual as a programme that is appropriate for one child with autism may not be necessarily appropriate for another. The IEP is the cornerstone for the education of a child with a disability as it identifies a child needs so that he/she may grow and learn during the school year. It is also a legal document that outlines the child's special education plan (goals for the school year), services needed to help the child meet those goals, a method for evaluating the learner's progress. The objectives, goals, and selected services are not just a collection of ideas on how the school may educate a child, the school district must educate the child following the IEP. According to Bachrach (2016), before we design a programme, implement an Individual Education, or Learning Plan (IEP/ILP), and put strategies into

place, we must have an in-depth knowledge of the learner, hence it is imperative to know the learner's challenges, weaknesses, abilities, and strengths and engage all stakeholders, i.e., multidisciplinary team including parents, educators, and therapists.

According to Miller-Wilson (2019), setting clear, measurable goals is essential for helping a child with autism make progress in and out of the classroom. The child's individualised education plan (IEP) consists of several goals for various areas of challenge for the child. The IEP should address all areas in which a child requires assistance, such as academic and non-academic goals. All areas of projected need, such as social skills (playing with other children, responding to questions), functional skills (dressing, crossing the street), and related services (occupational, speech, or physical therapy) can also be included in the IEP. The IEP should list the setting in which the services will be provided and the professionals who will provide the service. According to Redhorn (2017), the content of an IEP must include the following:

- A statement of the child's present level of educational performance, such as academic and non-academic aspects of his/her performance.
- A statement of goals that the learner may reasonably accomplish in the next 12 months. This statement should also include a series of measurable intermediate objectives for each goal. This will help both the parents and educators to know whether the child is progressing and benefiting from his/her education.
- Appropriate objective criteria, evaluation procedures, and schedules for determining, at least annually, whether the child is achieving the short-term objectives set by the IEP
- The development of specific, well-defined goals and objectives is crucial to your child receiving an appropriate education.
- A description of all specific special education and related services, including individualised instruction and related support and services to be provided (e.g., occupational, physical, and speech therapy; transportation; recreation). This

includes the extent to which the child will participate in regular educational programmes.

- The initiation date and duration of each of the services, as determined above, to be provided (this can include extended school year services). You may include the person who will be responsible for implementing each service (Redhorn, 2017).

3.7 INTERVENTION STRATEGIES

learners with ASD experience many vulnerabilities that have been stated above but some people can assist in mitigating such vulnerabilities. These include the following:

3.7.1 Educators' role

Educators play a pivotal role in the lives of learners with ASD. Starting early with intervention programmes is imperative as it helps learners with ASD to focus and build their routines. According to Autism Speaks, (2016), educators firstly establish the strengths of learners with ASD by closely observing them as each child is unique and has his/her strengths. Secondly, the educator will draw up visual schedules as learners with ASD learn visually. This provides them with a better understanding, thus keeps them calm. Thirdly the educator engages a class assistant to keep learners with ASD attentive as it becomes difficult for the educator to teach all learners at one time. Each learner's abilities and needs vary therefore the engagement of a class assistant is indispensable. Fourthly, the educator formulates a behavior plan for the learner diagnosed with ASD as sometimes they undergo a 'sensory overload' which often results in a 'meltdown'. In this way, the child is guided to a sensory room whereby he/she has an opportunity to self-regulate themselves and return to the lesson once he/she has calmed down. Finally, and most importantly engage with the mother as the mother will have the child's assessments and reports and this will provide insight into understanding the ASD learner (Autism Speaks, 2016).

3.7.2 Speech therapy

People with ASD may have major problems with both speech and nonverbal communication. They may also find it very hard to interact socially. For these reasons, speech therapy is a central part of treatment for autism. According to Autism Speaks (2018), Speech therapy can address a wide range of communication problems for people with autism. Some learners diagnosed with ASD have difficulty with speech sounds which hinders them to communicate effectively and if they do have speech and language, then it is sometimes difficult to understand what they say. This is since they experience huge problems with conversational skills which include eye contact and gestures. They also memorize things that they hear without knowing what is being said and have a reliance on echolalia and often repeat what other people say, thus they lack creative language. As a result of these challenges, a child with autism must do more than learn how to speak, such as learn how to use language to communicate. This includes knowing how to hold a conversation and tuning into both verbal and nonverbal cues from other people, such as facial expressions, tone of voice, and body language. Speech therapists assess the best ways to improve communication and enhance a person's quality of life. Throughout therapy, the speech-language therapist also works closely with the family, school, and other professionals. If an ASD learner is nonverbal or has major challenges with speech, the speech therapist may introduce alternatives to speech, such as picture exchange communication (PECS), electronic 'talkers', and sign language (Schlosser & Wendt, 2019).

3.7.3 Occupational therapy

Learners diagnosed with ASD exhibit significantly different patterns of sensory processing to their peers and others (Cervera, et al., 2017). Researchers have estimated that about 60-70 % of Children with ASD present with sensory modulation/processing disorder, thus causing them to be slower at integrating inputs from their senses, making their processing speed slower, often resulting in 'meltdowns' (National Autistic Society, 2018). This is due

to them having a lack of appropriate ‘filters’ to screen out irrelevant information. Sensory overload can manifest in many ways, such as challenging behaviors, withdrawal, and complete shutdown. Hence, an occupational therapist plays a pivotal role in developing skills, such as sensory regulation, fine motor, gross motor and daily living skills. However, the most essential role is also to assess and target the child’s sensory processing disorders which is beneficial to remove barriers to learning and help learners with ASD to be much calmer and more focused (Laurie, 2018).

3.8 CONCLUSION

The literature review presented an in-depth view of inclusive education and the inclusion of learners diagnosed with autism in particular as they are classified as special needs learners. Since 1994, when the Salamanca document was put forward there has been a call for the adoption of inclusive education policy worldwide. In the context of South Africa, it was the broader ideological changes, as the country moved forward from Apartheid and into a democratic society, which opened the doors to the idea of quality education for all. The White Paper 6 formed the framework in South Africa as the policy of Inclusive Education, adopting a model that recognised that all children can learn and that a range of educational needs exist and must be accommodated under a unified education system. Through inclusive education policy the term “barriers to learning” was conceptualised. Examples of such barriers were put forward and strategies addressed. The literature also addressed the unique nature of learners diagnosed with autism thus providing more insight and knowledge on their learning and development by the formulation of Individual Education Plans (IEPs) and the role of the educators, speech, and occupational therapists in the lives of learners with ASD. The next chapter will encompass the Theoretical and Conceptual framework of this study.

CHAPTER FOUR - THEORETICAL AND CONCEPTUAL FRAMEWORKS

“Within every living child exists the most precious bud of self-identity. To search this out and foster it with loving care; that is the essence of educating an autistic child.”

Dr. Kiyoko Kitahara cited from the Art of Autism, 2020

4.1 INTRODUCTION

The previous chapters reviewed the literature highlighting the biomedical perspectives and educational perspectives of autism. In this chapter, I propose and discuss the framework for mitigating the multiple vulnerabilities that learners with autism experience. The conceptual or theoretical framework within a research study forms the heart of this phenomenon as it governs how the researcher formulates the research problem, how this problem would be investigated, and what meaning is ascribed to the data accruing from such an investigation. Hence, it is opportune to provide a brief analysis to distinguish between the two notions of the theoretical and conceptual framework.

The theoretical and conceptual framework explains the path of research and grounds it firmly in theoretical constructs to make research findings more meaningful and acceptable to the theoretical constructs in the research field and ensures generalisability. It assists in stimulating research while ensuring the extension of knowledge by providing impetus to the research inquiry (Adam, et al., 2018). I used a combination of theories to synthesise the information more precisely. This synthesis or fusion may be called a model or conceptual framework, which fundamentally embodies an ‘integrated’ way of viewing and explaining the research problem, to provide a more distinct understanding of ASD and to provide a context for interpreting the study findings. Ultimately, the purpose of this chapter is to provide a theoretical context for this study by considering the literature concerning autism. The perspectives of educators and parents can be understood in the context of theories about

autism with a focus on mitigating the multiple vulnerabilities experienced by learners with autism. This will provide educators, parents, and the broader community guidance and assistance in dealing with learners diagnosed with autism.

4.2 CHOOSING AND POSITIONING THE STUDY IN THE THEORETICAL AND CONCEPTUAL FRAMEWORK

I indicated in the previous chapter that ‘autism’ is broad and that parents and educators have their own perspectives and perceptions about autism, hence every researcher must identify and describe explicit and applicable theoretical and conceptual frameworks for his or her study. The theoretical and conceptual framework is used as a guide for the researcher to ensure that the data and the findings speak to the framework. The researcher checks if the findings support or dispute the framework used and check if the findings can be explained using the framework. Theoretical and conceptual frameworks provide evidence of academic standards and procedure which clearly states what is pertinent in this study and how the researcher expects to fill the gap in the literature. Literature does not always clearly delineate between a theoretical or conceptual framework as there are slight differences between the two. The theoretical framework in a study is based on an existing theory or theories, such as a theory of motivation whilst the conceptual framework is based on this theory. Also, in your conceptual framework, you can add your own concept/constructs/variables that you think are relevant and then proceed to explore or test the relationship between them (Nikitina, 2015).

Autism, which is the focus of this study is influenced by many challenges and vulnerabilities that learners with autism experience, which resonated from intrinsic and extrinsic vulnerabilities, which will be further elaborated in the data presentation chapters. The theory used in this study is based on the learners’ situation and it is the perspectives of the parents and educators that will influence this study. An individual who experiences a situation is the one that can explain the challenges that he or she experiences. It is from this

backdrop that I have selected the ecological theory, situativity theory and social constructivism theory.

Theoretical and conceptual frameworks chosen in this study present a preferred approach to mitigating the multiple vulnerabilities experienced by learners diagnosed with autism. This will act as a map to provide the coherence for this empirical inquiry to enable the reader to understand how I conceptually-grounded my approach. The frameworks will represent the inherent challenges that learners diagnosed with autism experience. I discuss these frameworks below, focusing on the development, claims, and application of the framework to the study.

4.2.1 Ecological theories

Ettekal & Mahoney (2017) stated that human development is a form of interconnected, nested ecological levels, which can be applied to the environmental circumstance of autistic children. The ecological model of autism studies the behavior of individuals with autism within the context of many levels of environmental influences. He further stated that according to the ecological theory which influences the different spheres of a child's life, the child with autism behaves in various microsystem structures and processes in the home, school, and community. Darjan (2019), explains this ecological theory as a photograph metaphor, namely, looking at the social life from the perspective of the child. This is the social niche of the child. Like in any image, the closer the object, the bigger they are and more important from our perspective. Figure 4.1 highlights some of the factors that will assist in understanding the multi-system involvement of learners diagnosed with autism.

Bronfenbrenner's Bioecological Model of Human Development

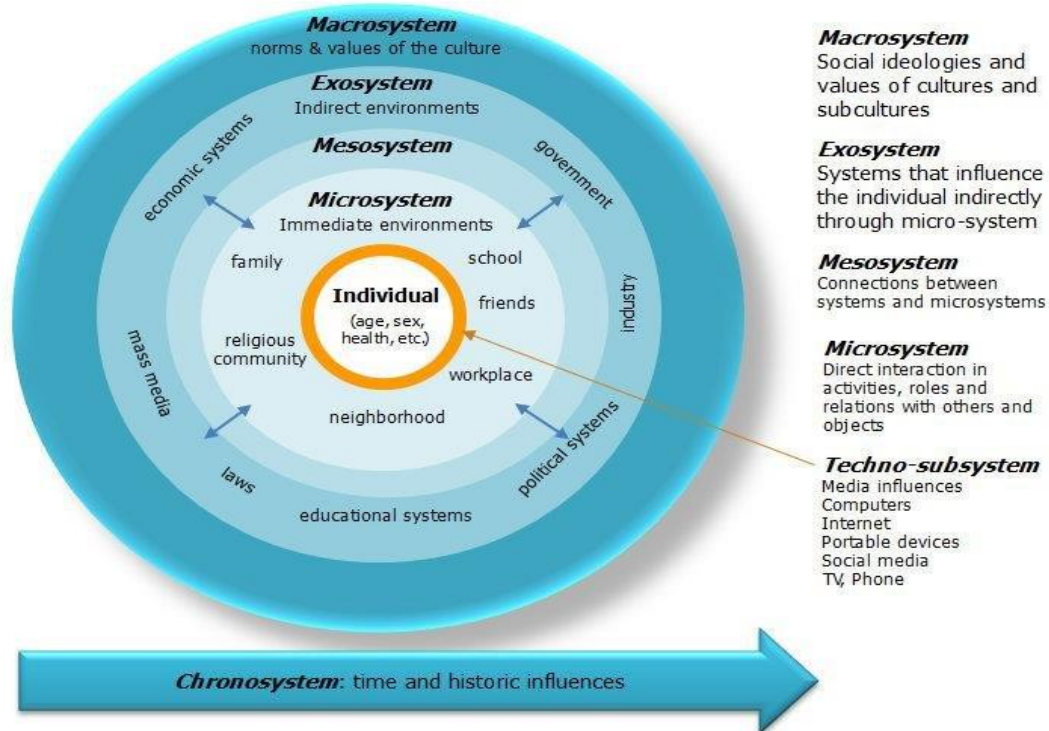


Figure 4.1: Bronfenbrenner's Bioecological Model of Human Development (Darjan, 2018)

According to Ettekal & Mahoney (2017), we should firstly consider the child's self, needs, traits, and life experiences which are the main areas that are affected by ASD and are the internal systems that focus on the clinical and psychological perspective of ASD. He also stated that most of the assessments are made on a specific child's cognitive and social development and specific behavioral patterns. Logically, from this perspective, the intervention is made at an individual level, attempting to change the child and to facilitate his/her adjustment to the external environment.

(a) Microsystem

The microsystem is the closest to the individual which is made up of the immediate family members as they are a constant presence in a child's life and plays a pivotal role in their

lives (Predescu, Ghazi, Darjan, 2018). The parents are important, not just because they meet the most basic demands of the child, but also because they provide the basic structure of a child's social life and they are mediators between the child and the larger world. ASD has a powerful impact on family life and dynamics (Smith, 2016). The existence of a child with ASD is forcing families to change to include the child's challenging behaviors (Jackson, 2015). The intervention at this level is mainly family therapy and counseling, parent training, and education, aiming to teach and counsel parents to respond properly to the child's needs (Spain et al., 2015). He further stated that at this middle ground, the child perceives all the support networks of its family, such as school, therapists, parents' employers, networks of friends, and community which are also part of the microsystem and is a major support group for the family.

Within this microsystem, the learners diagnosed with autism have direct contact with people closest to them, namely, their parents, siblings, educators, and friends who have a direct impact on the child's learning and development (Darjan, 2018). At this stage of the microsystem, Ettekal & Mahoney (2017), emphasise two proposals of learning and development of learners diagnosed with autism. The first being where the child will observe and participate in activities from people that are closest to them or those that have the necessary skills and knowledge. This is called the primary context. Secondly, being the secondary context, the child will be given resources and an opportunity to interact with those resources. In this way, the child is mediated to their learning and development. In this study, we focus mainly on the microsystem, the relationship that the parent, who is the primary caregiver or educator, the educator, therapists, and the child with autism share in developing the child's cognitive and social ability by transforming and organising the environment.

(b) Mesosystem

The mesosystem consists of all the inter-relationships and influences between microsystem and exo-system dimensions. In the mesosystem, the relationship between the ASD learner's parents and the broader community that have a direct relationship with the learners with

ASD is exhibited, namely, the engagement between the parent and the ASD learner's educator can impact the learning and development of the ASD learner, hence within this engagement, the child's individual needs are discussed including their expectations and progress (Garbacz, 2016). He further stated that teacher-parent relationships and involvements are important for supporting learner outcomes.

(c) Exo-system

The exo-system is the system that influences the individual indirectly through the microsystem. From the ASD child's perspective, this is the background, it is not very clear and outstanding, hence it is the psychological development of the ASD learner that is affected by environmental stimuli namely, society as a whole and other educational systems and laws (Darjan, 2018). The services and education for the child are regulated by specific policies, the society defines the rights and facilities that are available for the child (Saggers, 2016). Furthermore, the awareness, intervention, and understanding that learners with ASD get at this stage impacts their learning and development and daily activities (Raisingchildren, 2020).

(d) Macrosystem

According to Predescu, Ghazi, Darjan (2018), every picture is cut from a larger picture, so even if the photo has a meaning, it is still heavily embedded in a larger picture. This is the macrosystem, which consists of norms and values of the culture and sub-cultures. The macrosystem is comprised of the relationship that societal attitudes and cultural beliefs may have on the child's learning and development (Darjan, 2018). With ASD, the layman theorises of it, as a disease, favours clinical approaches of it from a medical perspective and as such the discourse is full of medical terms like diagnosis, therapy, symptoms, etc. On the other hand, that leads to the idea that the children with ASD are sick and need to be treated and made sane again (Garbacz, 2016).

These four systems are interrelated and impact the learning and development of learners with ASD, namely the immediate environment, which is characterised in the microsystem,

and the exo-system influences the stimulation of learning and development of learners with ASD. The mesosystem and macrosystem in the ecological theory are related to the involvement of people that the child is closely associated with, namely the parents, educators, and therapists. In essence, the kind of environment that a parent and educator create for the child with autism determines the learning and development.

4.2.2 Social constructivism theory

Autism first emerges in infancy and is characterised by chronic impairments in social development, including disturbances in communication and restricted or repetitive patterns of behavior (Saggers, 2016). I propose social constructivism as a framework for inclusive practices and enhancement of social development in learners diagnosed with autism as the social theory of ASD implies that people diagnosed with autism experience difficulty forming meaningful long-term friendships and relationships due to their unusual behaviors, namely they tend to be aloof, aggressive, stilted, shy, rude, thoughtless, and immature (National Institution for Deafness & other Communication Disorders (NIDCD), 2018). They lack the theory of understanding someone else's feelings, emotions and state of mind thus they experience difficulties with interpreting facial expressions and body language of other people (Hale, 2018). Learners diagnosed with autism also experience difficulty understanding what others mean and how to behave can somewhat become bewildering, exhausting and stressful for them (National Autistic Society, 2020). Stavropoulos (2018) states that the social motivation hypothesis, suggests that children with ASD are not intrinsically motivated to interact with other people because they are not neurologically "rewarded" by social interactions the same way typically developing children are, so they do not go out of their way to interact with people as this is not rewarding for them. Hence this leads to difficulty in making friends, and sometimes get bullied. This study illuminates the social vulnerabilities that learners with ASD experience.

A "social constructivist" theory of autism is the active participation of infants in social interactions with other people, as it is necessary for typical social-communication and

neurobehavioral development in early childhood, especially that of social activities and interactions, namely play interactions (Jamero, 2019). Play interactions give a child with autism an opportunity of developing his/her social cognitive abilities, language, and communication skills and develop their fine and gross motor skills (Raisingchildren, 2020). Autism Speaks (2018), adds that although play interactions might be restricted, namely, limited toys, etc. and repetitive for a learner diagnosed with autism, the aim is to copy simple actions, explore the environment, share objects and attention with others, respond to others, take turns, and imagine what other people think and feel.

Social constructivist theory is closely aligned to Vygotsky's theory which advocates a bottom-up teaching approach wherein the educator facilitates, as opposed to directs, what and how learners learn concepts both in and outside the classroom (Jamero, 2019). A fundamental aspect of Vygotsky's theory is the Zone of Proximal Development. This is an approach that is guided by adults or more skilled peers to master a skill (Tzuriel, 2020). Another part of this theory is scaffolding, which is giving the learner the right amount of assistance and guidance at the right time (Tzuriel, 2020).

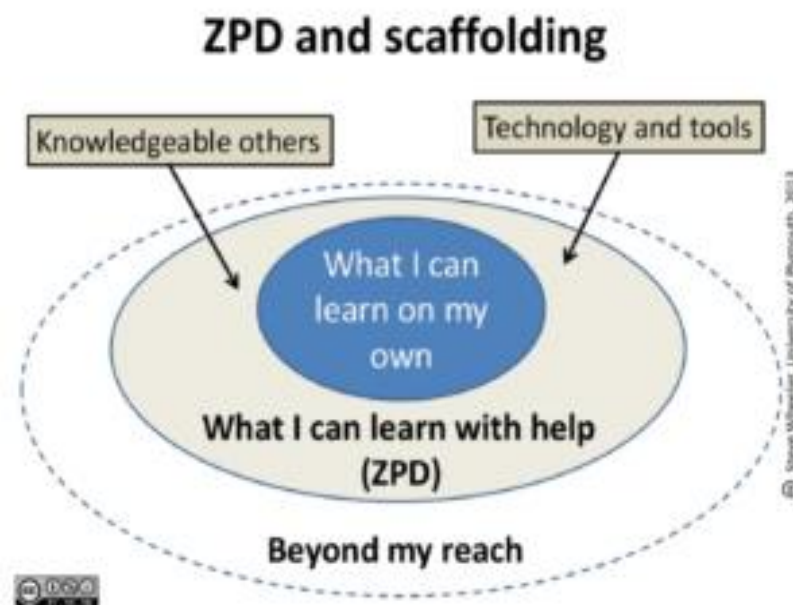


Figure 4.1: Model of Vygotsky's zone of proximal development (Adapted from McLeod, 2020)

McLeod (2020) stated that if a learner has the ability to perform a task with some assistance, then he or she is closer to mastering it. Webb and Jones (2017) added that educators play a major role in establishing the learning environment and extending learners potential to learning by using various technologies and resources. They further stated that knowledge is constructed from within rather than being transmitted by an external source. Therefore, learning is seen as a process of actively constructing knowledge by integrating experiences with the learners' prior knowledge, thus the learner plays an active role in building his/her knowledge, which includes socialization and communication (McLeod, 2020).

4.2.3 Situativity theory

I chose Situativity theory to frame this study. Situativity theory refers to theoretical frameworks which argue that knowledge, thinking, and learning are situated or located from one's own experience based on each situation (Department of Medicine and Pathology, 2015). The importance of context to these theories is paramount, including the unique contribution of the environment to knowledge, thinking, and learning as they argue that knowledge, thinking, and learning cannot be separated from (they are dependent upon) context (Smets and Struyven, 2018). He further stated that Situativity theory includes situated cognition, situated learning, ecological psychology, and distributed cognition. In this study, I will first outline key tenets of situativity theory and then compare situativity theory to information processing theory, hence I suspect that the reader may be quite familiar with the latter, which has prevailed in medical education research.

Contrasting situativity theory with information processing theory also serves to highlight some unique potential contributions of situativity theory to work in medical education. The situativity theory is based on the notion that education is the essential part of the teaching and learning process for learners diagnosed with autism, hence, it is with this background that I will explain further the experiences of autistic learners and the impact it has on their daily lives to mitigate such vulnerabilities. Furthermore, the situativity theory will be based on how participants and the environment can interact with each other.

Environmental changes affect learners with ASD making their situation somewhat distorted often becoming agitated and displace aggression (Autism Speaks, 2018). They are ‘supersensitive’ to any change, such as routines, environment, and set patterns (National Health Services, 2015). Researchers highlighted this understanding by experimenting with ‘rats’ whereby they reared them in three different environments, where they used a standard cage and two types of enriched environment with toys and treats, one where these “enrichments” stayed the same and another where they changed unpredictably (National Institute of Health, 2018). They found that rats tend to do better in the predictable enriched environment than the standard or unpredictable enriched ones on various tests of sociability, behavior, and emotional response, hence, this study generalised that many people on the spectrum prefer stability and consistency in their environment and activities and are often upset by changes to routines (National Health Sciences, 2015). Educators and parents from various schools analysed learners diagnosed with autism and concluded the same. Schools, therefore, set up sensory rooms so that learners diagnosed with autism could self-regulate when activities changed from their normal day. In essence, when the environment changed to something calmer or familiar, their response would somewhat be different. Whilst parents stayed at home during weekends and holidays to avoid the embarrassment of meltdowns in public. It is from this background that I examine the critical view of parents who were burdened by the environmental changes which learners with ASD experienced in unpredictable situations.

4.3. SELECTION OF THESE THEORIES

The above three theories were selected to ground this study, namely ecological theories, social constructivism theory and situativity theory. Each of these theories play a phenomenal role in mitigating the multiple vulnerabilities experienced by learners diagnosed with autism. Hence the ecological theory encompassed the behavior of learners with autism within the context of many levels of environmental influences which inevitably impacts the different spheres of a child’s life. The social constructivism theory influences the enhancement of social interactions of learners with autism in a given environment and

the Situativity theory influences the way the learner with ASD thinks, behaves and learns based on the situation that he/she is placed in. Ultimately all three theories indicate that learners with ASD behave, think and learn based on their environment, situation and circumstances. The environment and situation that the learner with ASD is placed in, plays a critical role in a child's learning and development which influences their behavior, communication and social interaction. These theories will be further engaged in the data presentation chapters which will be in direct relation to learners' environment, situation and circumstances.

4.4 IMPACT OF AUTISM SPECTRUM DISORDER

4.4.1 Parents and their families

The effects of having a child with ASD on parents and families are, like the disorder itself, multifaceted and pervasive (Picardi et al., 2018). From observation, meeting the high care demands of affected children requires time, effort, and patience. Picardi et al. (2018), concurs that caring for children with ASD is challenging due to the severity and chronicity of ASD, their extensive developmental and physical comorbidities, and the difficulties of health services in ensuring the availability of integrated and intensive interventions needed for learners with ASD. Parents often feel overwhelmed, guilty, confused, angry, or depressed when they see their child being clumsy, unresponsive, angry, or disregards others, thus parents and families have a huge burden of seeing to these challenges (Brazier, 2016). Research has shown that raising a child with an ASD is a very stressful experience for parents and has been associated directly with their children's behavior, as well as the effects, that parenting a child with ASD had on their own well-being and functioning (Paul & Fouche, 2017). Siblings feel neglected sometimes as parents have a huge demand of spending more time on the ASD child, hence not only the parents are burdened by these challenges, but it is also more stressful for siblings to co-operate and understand the demands of ASD and communicate with them as typically growing siblings (Brazier,

2016). learners with ASD are affected by the triad of impairments that influences their daily lives.

The triad of impairments, which is social communication, social interaction, and social imagination has a significant impact on learners with ASD and their families (Ralph, 2018). This can be a very overwhelming and overbearing experience for parents and their families because through my discussion and interaction with parents, I discovered the plethora of difficulties they experience as many people do not understand the condition and it is absolutely challenging for parents and families to give the broader community and extended families an explanation or definition of ASD (cf, Chapter 6 and 7). In addition, the understanding and conceptualisation are continuously changing (Lyll et al., 2017).

Parents also mentioned their compounded challenges within their homes, which includes, financial strain, parenting efficacy, parenting stress, an increase in their physical and mental health conditions compared with parents of both typically developing children and children with other developmental disorders (Hartley and Schultz, 2015). Learners diagnosed with autism also find it difficult to express their needs (Saggers, 2016). This becomes frustrating for both the parents and the child. The parent finds it difficult to decipher the needs of the child whilst the child experiences difficulty expressing their needs (Anwar, et al., 2018). They further stated that the child often becomes aggressive, and the parent becomes more stressed as the parent is unaware that the child is sick, hungry, hurt, upset, or tired. From experience and observation, it becomes more stressful when learners are non-verbal as they cannot report abuse, incidents, and neglect.

Chistol, et al. (2018) affirms that financial strain and time pressures, high rate of divorce and lower overall family well-being increases the demands of having a child with an ASD. They further emphasised that a child diagnosed with autism needs several services to assist in their care and can often be financially stressful for parents. It can be argued that a child with autism may need evaluations, home programmes, and various therapies which can be expensive. Thus, parent and family effects can reciprocally and negatively impact the

diagnosed child and can even serve to diminish the positive effects of the intervention. However, most interventions for ASD are evaluated only in terms of child outcomes, ignoring parent and family factors that may influence both the immediate and long-term effects of therapy (Chistol, et al., 2018). It cannot be assumed that even significant improvements in the diagnosed child will ameliorate the parent and family distress, especially as the time and expense of intervention can add further family disruption (Karst & Hecke, 2019).

4.4.2 Impact of ASD on educators

Teaching autistic children can be exhausting and stressful for educators, thus many educators experienced burnout due to the lack of support, guidance, and assistance in handling learners diagnosed with autism (Boujut et al., 2017). The inclusion of learners diagnosed with autism in class requires educators to implement structural changes, such as, educational organisation and classroom management which significantly increases their workload (Saggers, 2016). These requirements sometimes collide with a lack of knowledge or competence to deal with learners with ASD, thus this can be perceived as having special attributes in dealing with such learners (Boujut et al., 2017). Through my interviews undertaken with educators, they confirmed some of the extreme stresses and exhaustion they experience sometimes due to lack of self-efficacy and lack of guidance and assistance. According to the National Institute of Health (2018), autism spectrum disorders cause issues and challenges in crucial areas of development, such as verbal and non-verbal communication, social interaction, imagination, and sensory processing, thus making it difficult for them to understand and communicate their needs to educators and peers, and understand some classroom directions and instructions (Jackson, 2015).

Inappropriate social interaction can lead to challenging behaviors, bullying, and ostracizing (Hebron, Humphrey, and Oldfield, 2015). Educators sometimes feel that their teaching methods and strategies are ineffective especially when learners with ASD have difficulties with an imaginative or creative play which hampers their interaction with other children

(Kerch, 2016). Furthermore, learners with ASD experience sensory issues, which means that they do not cope in noisy environments, being touched by others and making eye contact (Autism Speaks, 2018). The inability to fully decipher the world around them, often makes education stressful for the child, and educators find it difficult to meet the needs of learners on the autism spectrum (Synapse Reconnecting Lives, 2016).

From observation, educators also find it difficult to decipher the learners with ASD' unique needs and abilities which impacts their scholastic performance (Saggers, 2016). Through my discussions and engagements with educators during the semi-structured interviews, educators have highlighted that every-day comes with a new set of challenges although they draw up IEPs for learners with ASD, however, sometimes learners come to school 'emotionally wrecked.' Thus, they do not comply due to their sensory overload. This then means educators need to decipher the cause of the emotional issues otherwise the learner has repeated 'melt-downs.' This then disrupts the whole classroom routine and work which becomes overwhelming for educators (cf, Chapter Six and Seven).

4.4.3 Impact of autism on a learner's life

Every ASD learner on the spectrum is unique and their needs and abilities vary and are reflected differently (Jackson, 2015). learners with ASD experience common challenges on the spectrum, such as, social interaction and communication, which impact every aspect of their daily lives (National Autistic Society, 2017). According to Beth Saggers (2016), these challenges can lead to high-stress levels causing anxiety and depression that are much higher than other learners. She further amplified that 72% of learners on the autism spectrum have additional mental health needs. Although classrooms are social environments where learners can interact, socialise and communicate with others effectively, it can also intensify the stress, anxiety, and depression in learners (Burchi & Hollander, 2019). Research has shown that a lack of social-emotional competence can lead to not only a decrease in a learner's connection with the school but also their academic performance (National Autistic Society, 2016). This reinforces the notion that social-

emotional learning is critical to learning, as well as in school attendance, classroom behavior, and academic engagement for all learners (Selbst, 2017). The heavy focus on academic aspects of the curriculum and the demand for data-driven accountability that schools are required to address, often result in the focus on social and emotional learning and mental health being overshadowed or pushed to one side (Saggers, 2016).

4.5 THEORETICAL MODELS OF AUTISM

According to Nicholas Chown (2017), who is an independent autism researcher and trainer and also acts as an advocate and mentor for various autistic adults, there are theoretical models of autism based on three main models of disability, such as the medical model, social model, and the bio/psycho/social model. The terms used in this model are ‘indifferent kind,’ ‘interactive kind,’ and ‘impairment effects.’ He highlights the essential differences between the main models of disability, such as the medical, social, and bio/psych/social models. He also emphasised that those who regard autism as cognitive, perceptual, and sensory different, object to the term ‘impairment’ and would presumably also object to the term ‘impairment effects.’ However, the World Health Organisation (2019) argues that ASD refers to a range of conditions characterised by some ‘degree of impaired’ social behaviour, communication and language, and a narrow range of interests and activities that are both unique to the individual and carried out repetitively.

4.5.1 Medical Model of disability

According to Identity-First Autistic (2016), the medical model of disability says people are disabled by their impairments or differences, hence these impairments or differences should be ‘fixed’ or changed by medical and other treatments, even when the impairment or difference do not cause pain or illness. The medical model looks at what is ‘wrong’ with the person, not what the person needs, thus it creates low expectations and leads to people losing independence, choice, and control in their own lives (Chown and Beardson, 2017).

The medical model of disability equates disability solely with impairment, ignoring the involvement of social, cultural, and environmental factors in the construction of disability (Brook, et al., 2017). He further stated that the medical model blamed society and associated disability with idleness and character weakness, however over time societal attitudes began to change and disability was increasingly seen as a personal tragedy for the unfortunate individual with impairments. This approach promoted attitudes of paternalism and mechanisms of dependency within society, which led to a more caring or charitable society (Chown and Beardson, 2017).

4.5.2 Social Model of disability

According to the Medical Health Foundation (2020), the social model of disability says that disability is caused by the way society is organised as it identifies systemic barriers, negative attitudes, and exclusion by society (purposely or inadvertently) that means society is the main contributory factor in disabling people. While physical, sensory, intellectual, or psychological variations may cause individual functional limitations or impairments, these do not have to lead to disability unless society fails to take account of and include people regardless of their individual differences (Identity-First Autistic, 2016).

There is much more that is needed to ensure that people with disabilities take their rightful place as fully-fledged citizens in society (Department of Basic Education, 2001a, p. 7). There is still much lip service paid to discrimination and the practice of exclusion through 'nominal inclusion,' which is more prevalent than substantive inclusion (Woods, 2017). The Cerebral Palsy group referred to in relation to the medical model of disability describes the social model of disability as the 'social model' of disability, makes a clear distinction between the impairment itself (such as a medical condition that makes a person unable to walk) and the disabling effects of society in relation to that impairment. In simple terms, it is not the inability to walk that prevents a person from entering a building unaided but the existence of stairs that are inaccessible to a wheelchair-user. In other words, 'disability' is socially constructed.

4.5.3 Bio/psycho/social Model of disability

The International Classification of Functioning Disability and Health (ICF) is the framework developed by the World Health Organization (WHO) for measuring health and disability at both individual and population levels (World Health Organization, 2018). The ICF is a classification of health and health-related domains based on bodily, individual, societal, and environmental perspectives through placing individuals on lists of bodily functions, activity limitations, and environmental factors. The ICF puts the notions of ‘health’ and ‘disability’ in a new light. It acknowledges that every human being can experience a decrement in health and thereby experience some degree of disability. Disability is not something that only happens to a minority of humanity. The ICF thus ‘mainstreams’ the experience of disability and recognises it as a universal human experience. By shifting the focus from cause to impact places all health conditions on an equal footing allowing them to be compared using a common metric – the ruler of health and disability. Furthermore, ICF takes into account the social aspects of disability and does not see disability only as a ‘medical’ or ‘biological’ dysfunction (World Health Organization, 2018).

4.6 CONCLUSION

It is from this backdrop that I base my notion of theories highlighted in this chapter to frame this study. This study is based on the real-life experiences of educators, parents, and learners diagnosed with autism. Hence, three theories were discussed, such as the ecological theory, social constructivism theory and situativity theory, which collectively provide a framework for analysing data for this study. Furthermore, I linked all three theoretical constructs to broaden the frame of my study to mitigate the multiple vulnerabilities experienced by learners with autism. This highlighted the impact ASD has on the parents and their families, the educators, and the learners themselves.

I also discussed the three models of disability which are centered around the ‘impairments’ of autism. In the next chapter I outline and justify the methodological orientation of the study. I also highlight the paradigm, the research design, the data generation, and data analysis strategies that I employed in my study to achieve my study’s objectives and to answer the research questions that underpinned this study.

CHAPTER FIVE - RESEARCH DESIGN AND METHODOLOGY

“Our duty in autism is not to cure but to relieve suffering and maximize each person’s potential.”

John Elder Robison (2020)

5.1 INTRODUCTION

In the preceding chapter, I presented and discussed the theories and models that provided a framework that underpinned this research. In this chapter, I present and justify the research design and methodology that I adopted for this qualitative study which aims to mitigate the multiple vulnerabilities experienced by learners diagnosed with autism. I will present my research design and methodology to describe the process and procedures I used to generate and analyse data to answer the research question. Thus, this will reflect how the research design unfolded in this study. I present the location in which the data was generated and the sampling process that I used. I will describe the access issues and describe the data generation process. Finally, I will discuss the issues of trustworthiness and issues of ethical consideration as well as the limitations thereof.

5.2 PURPOSE OF THIS STUDY

This research intends to mitigate the multiple vulnerabilities that learners diagnosed with autism experience. As highlighted in the previous chapters, ASD is a complex neurodevelopmental condition with lifelong impacts. There’s a multitude of factors, including genetic and environmental factors, that are speculated as the causes for ASD. Research on ASD epidemiology has made significant advances in the past decade, however, researchers (Lyall et al., 2017), and I believe that there is a need for further investigation. There has also been very limited information and guidance on ASD, hence, parents bear the brunt of public criticism, and learners diagnosed with autism experience

ridicule and get ostracised (National Institute of Health, 2018). I intend to contribute to broadening the knowledge on ASD through my observations and data analysis.

Consequently, I will attempt to answer the following research questions:

- What are the vulnerabilities experienced by learners diagnosed with autism?
- What challenges do educators and parents experience in the teaching and learning of learners diagnosed with autism?
- How do educators and parents mitigate these vulnerabilities?

The research being investigated aims to achieve an in-depth knowledge and understanding of learners with autism and mitigate multiple vulnerabilities of learners diagnosed with autism. The design, therefore, includes the epistemological positioning taken in the research process, the research approach, research methodology, and the data production process. In this section, I elaborate on the methodological choices that I have taken and argue for the appropriateness of these choices.

5.3 RESEARCHER POSITIONALITY

The articulation of researcher positionality is an essential precursor to this inquiry as it places the researcher within a systemic method of the inquiry, thus these ways of knowing and understanding the lived experience of the self are meant to further inform not only the individual experience but the collective experience at large (Throne, 2019). This research is based on my personal experience as an educator in the special needs field which I believe can influence this research.

In many ways, I am different from the participants in this research but at the same time, I am also very similar. As an educator in the special needs field who was experiencing challenges with learners diagnosed with autism, and watching my colleagues experience similar challenges, I felt that there was a need for parent input as they have the first-hand

experience with raising learners with ASD. Parents are the primary teachers of their children (Smith, 2016). Whilst I was not in a position to rule out such subjectivities, I pursued it when conducting this research. I questioned my positionality as to how participants would react to my list of questions in the interviews, as I observed an evasive, emotional kind of reaction from some of the parents. Parents did not want to be reminded of their experiences of grief and sorrow, so I decided to create a more subtle approach in a non-authoritative setting at a place convenient for them, consequently having a positive impact on the findings of my research. I constantly emphasised that they are the best and chosen ones to have these learners diagnosed with autism, who are so well-cared for by them. I believe that this was likely to reduce the apprehension for the interviews which created and increased the trustworthiness of this study.

5.4 RESEARCH DESIGN

According to McCombes (2019), a research design is a framework for planning your research and answering your research questions. Creating a research design is about making decisions related to the research, such as the type of data you need, the location and the timeframe of the research, the participants and sources, the variables and hypotheses, the methods for collecting and analysing data. The research design also sets the parameters of your research as it determines exactly what will and will not be included. Finally, it will define the criteria that will evaluate your results and draw your conclusions (Sacred Heart University, 2019). The reliability and validity of your study depends on how you collect, measure, analyse, and interpret your data (Middleton, 2019). This is essentially the interrelatedness of the data generation to the research question and the conclusion which undergoes a series of stages (Acqnotes, 2017):

Stage 1 – defining the research question

Stage 2 – designing the research

Stage 3 – data generation

Stage 4 – data analysis

Stage 5 – report research findings

Consequently, the research design will focus on the research paradigm which will interpret my data, using the research dimensions, such as ontology, epistemology and methodology. To quantify this, I will offer a brief overview of the three components of these dimensions for a better understanding of this research, such as:

- ontology – What is reality?
- epistemology – How do you know something?
- methodology – How do you go about finding it out?

The diagram below explains the terms and relationships between them, and an in-depth discussion will follow:

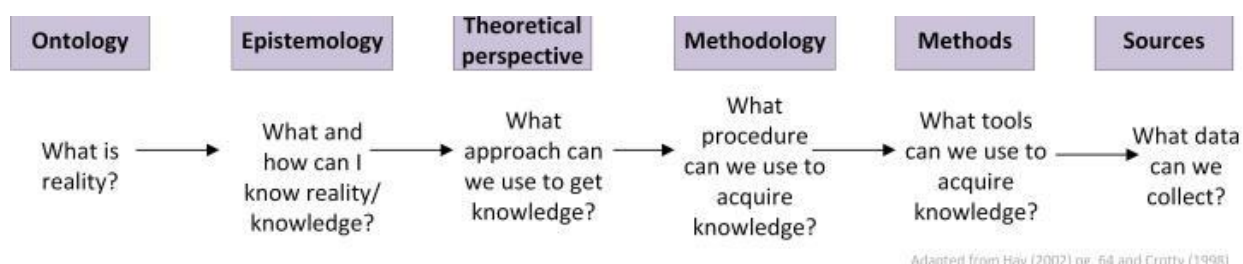


Figure 5.1: Research dimensions (Patel, 2015)

5.4.1 Ontology

According to Rehman and Alharti (2016), ontology refers to “our beliefs about reality.” Researchers have assumptions (sometimes implicit) about reality, how it exists and what can be known about it. It is the ontological question that leads a researcher to enquire about the kind of reality that exists and this study, examines the lives of learners diagnosed with autism, their daily living, and the challenges that they experience. According to Sagers (2016), learners diagnosed with autism view reality very differently from other learners, namely they have difficulty seeing things from other people’s perspectives and understanding that other people can have desires and beliefs that are different from theirs. They also have difficulty to understand and predict other people’s behavior and to understand how their behavior affects others. These traits are critical in social development

and without it, learners with ASD can find it difficult to understand and get along with other people (Raisingchildren, 2018).

5.4.2 Epistemology

Martinich and Stroll (2019), states that epistemology is the study of the nature and origin of human knowledge or it can be referred to as the theory of knowledge. It is the epistemological question that leads a researcher to debate “the possibility and desirability of objectivity, subjectivity, causality, validit and generalizability” (Rehman and Alharti, 2016). Adhering to an ontological belief system (explicitly or implicitly) guides one to certain epistemological assumptions and in this study, it is the way learners diagnosed with autism look at how things are and how things work. Children with ASD can struggle with attention, transitions, organisation, memory, time management, emotional control, and frustration (Raisingchildren, 2018). Difficulties with these abilities can affect a child’s learning. For example, while solving a mathematics problem, the child might know her facts well, but may have difficulty deriving at a solution. This is because she cannot organise her ideas or put all the information together to solve the problem (Jackson, 2015).

5.4.3 Methodology

The methodology is “an articulated, theoretically informed approach to the production of data” (Rehman & Alharti, 2016). It refers to the study and critical analysis of data production techniques. It is the “strategic plan of action, processor design,” that informs one’s choice of research methods. It guides the researcher to what type of data is required for a study and which data collection tools will be most appropriate for his/her study. It is the methodological question that leads the researcher to ask how the world should be studied (Rehman and Alharti, 2016). Hence, for this study, I used the interpretive-phenomenological paradigm that views the real-life experiences, perspectives, and views of educators who teach learners diagnosed with ASD and parents that have children with ASD. They were able to provide their perspectives from an informed position, thereby

attempting to mitigate the challenges experienced by learners diagnosed with autism. The means of collecting and analysing data, such as observations and semi-structured interviews are used in this study based on the researcher's theoretical mindset. This method allowed me to generate data based on the epistemology of ASD. The semi-structured interviews were carried out in a very relaxed and conducive environment at a convenient time whereby both parents and educators felt comfortable undertaking this method of data collection, thus this gave me their true interpretation, perspectives, and views of ASD and the challenges that learners diagnosed with autism experience. This was further accredited by observations that I made in the classrooms of those respective educators and homes of those learners with ASD. I am certain that this method of data generation will add value to this research.

5.5 RESEARCH PARADIGM

The research paradigm describes the researcher's worldview, which is the perspectives or set of beliefs that inform the meaning or interpretation of research data (Rehman and Alharthi, 2016). According to Kivunja and Kuyini (2017), a research paradigm inherently reflects the researcher's beliefs about the world that s/he lives in and intends to live in, as it constitutes the abstract beliefs and principles that shape how a researcher sees the world, and how s/he interprets and acts within that world. According to Rehman and Alharthi (2016), there are three major paradigms to research, such as positivism, critical theory, and interpretivism. Hence, he describes the positivism paradigm as being the reality that exists independent of humans and is not mediated by our sense and is governed by immutable laws. He describes the critical theory as the reality that exists, but it has been shaped by cultural, political, ethnic, gender and religious factors that interact with each other to create a social system, however interpretivism rejects the notion that a single verifiable reality exists independent of our senses. According to Dean (2018), interpretivism suggests that reality is subjective, multiple, and socially constructed and adopts various methods that generate qualitative data, and although numerical data could be involved, they are always conclusive. Examples of data collection methods that yield qualitative data include, open-

ended interviews with varying degrees of structure, such as semi-structured open-ended interviews, observations, field notes, personal notes, documents, etc. which I used in this study.

The interpretative paradigm has been criticised for, among other things, being “soft” incapable of yielding theories that could be generalised to larger populations and the involvement of the researcher with participants which leads to lack of objectivity (Rehman and Alharthi, 2016). Pham (2018, p. 6) argues that qualitative inquiry is not “soft it demands rigor, precision, systematicity, and careful attention to detail.” He further explained that although positivist research has its merits, there are social phenomena that could be best investigated under the interpretive paradigm.

According to Dean (2018), interpretivism is marked by three schools of thought in social science research, such as phenomenology, ethnomethodology, and symbolic interactionism which emphasise human interaction with phenomena in their daily lives and suggest qualitative rather than a quantitative approach to social research. He describes phenomenology’ as a theoretical viewpoint that believes that individual behavior is determined by the experience gained out of one’s direct interaction with the phenomena which rules out any kind of objective external reality. During interaction with various phenomena, human beings interpret them and attach meanings to different actions and or ideas and thereby construct new experiences (Pham, 2018). Therefore, the researcher has to develop an empathetic understanding to know the process of interpretation by individuals so that she or he can experience feelings, motives, and thoughts that are behind the action of others (Patel, 2015). The interpretive-phenomenological paradigm, which I adopted in this study will allow me the scope to investigate and develop an in-depth understanding of the perspectives and experiences of the educators and parents of learners diagnosed with autism to mitigate some of the challenges that learners experience. Patel (2015) concludes that the research process has three major dimensions, such as ontology, epistemology, and methodology that maintain the research paradigm which is the interrelated practice and thinking that define the nature of inquiry.

5.6 QUALITATIVE RESEARCH

Qualitative research, according to Bhat (2019), is defined as a market research method that focuses on obtaining data through open-ended and conversational communication. This method is not only about “what” people think, but also “why” they think so. It is also a type of social science research that collects and works with non-numerical data that seeks to interpret meaning from these data that help understand social life through the study of targeted population groups (Crossman, 2019). Incidentally, it is the social interaction of learners with ASD that hinders their communication and development (National Institute on Deafness and other Communication Disorders, 2018). Hence, this study aims to highlight the triad of impairments that learners with ASD find challenging. To qualify this statement, I have selected a population group that was targeted through a process of purposive sampling which included educators that teach learners diagnosed with autism and parents who have children with ASD through a process of semi-structured interviews. The interviews enabled me to obtain and interpret meaningful information.

Aspers (2019) defines qualitative approach as a research form, an approach or strategy that allows for different interpretations of the phenomenon that is being studied, and in which the contributors have a more flexible way of giving their views and demonstrating their actions. Furthermore, Denny and Weckesser (2018) assert that qualitative research provides insights and understanding of people's experiences. It may also be used in informing the development of interventions or in understanding barriers for their successful implementation. This study aims to view the real-life experiences of parents of learners with ASD and educators that teach learners diagnosed with autism. These experiences will highlight the challenges that learners diagnosed with autism experience with a view of developing intervention strategies to suit their abilities and needs. These definitions paved the way for my justification to adopt a qualitative approach.

5.7 RESEARCH METHODOLOGY

5.7.1 Sampling

The sample used in this study was purposively selected. A purposive sample has been selected based on the characteristics of a population and the objective of the study (Crossman, 2019). The type of purposive sampling that I chose is specific to this study which is the total population sampling that examines the entire population that has one or more shared characteristics. This kind of purposive sampling technique is commonly used to generate reviews of events or experiences within larger populations (Crossman, 2019). The purpose of this study is to mitigate the challenges experienced by learners diagnosed with autism. As a result, the sample used in this study are educators that teach learners diagnosed with autism and parents who have children that are diagnosed with autism at special needs schools. The parents and educators used in this sampling process give a first-hand experience of challenges experienced by learners diagnosed with autism and the challenges that they experience with learners diagnosed with autism. Educators highlighted the challenges that they experience in class and at school *per se*, whilst parents highlighted their daily challenges from birth to having difficulty finding suitable educational institutions for their children.

Raising a child with autism can be very challenging and emotional for parents, and they may experience difficulty talking openly to friends, family, and others who do not share the same experiences and issues (Brazier, 2016). Some parents were very emotional and evasive to talk about their ASD child. In one example, a parent was willing to be interviewed, however, their spouse was reluctant. However, I still persevered to engage with those parents that were willing to talk about their children in convenient areas where and when they felt comfortable talking about their autistic child. Some educators were also apprehensive to engage with this research as they felt that they lacked knowledge and expertise with learners diagnosed with autism. Some educators did not have time to accommodate me whilst some educators felt I was in their 'space' as they were frustrated, stressed, and tired at the end of the day after being with the learners for the entire day.

However, I still persevered and engaged with those educators who showed an inclination towards learners diagnosed with autism through their experiences at a time and place convenient and comfortable for them.

Consequently, the sample consisted of three educators teaching learners diagnosed with autism and three parents that have children diagnosed with autism from six special needs schools in the Pinetown district. Furthermore, the learners diagnosed with autism in this study, ranged on the lower spectrum of autism, hence their cognitive functioning was much lower than learners on the higher spectrum of autism. The rationale for choosing educators and parents was to get in-depth knowledge and understanding to ascertain the challenges of their ‘lived’ experience as this is one of my research questions. The parents are the primary educators and caregivers to learners with autism (cf, Chapter Six, Seven & Eight).

Interview Profile

The educators selected for this study was done by purposive sampling. The profile of the interviewees is presented in Table 5.1. Pseudonyms will be used for participants and schools will be alphabetically arranged, (e.g., Mr Krishna (E) from School A)

NO. OF SCHOOLS	NAMES OF EDUCATORS	GENDER OF EDUCATOR	RACE	NO. OF YEARS TEACHING EXPERIENCE	QUALIFICATIONS
A	Mr Krishna	Male	Indian	28	Diploma in Education
	Miss Geeta	Female	Indian	12	BEd Degree
	Mr Ram	Male	Indian	35	Diploma in Education
B	Mr Reddy	Male	Indian	20	Bed/FDE - Special Needs
	Mrs Singh	Female	Indian	30	BEd Degree/FDE - Special Needs
	Miss Harry	Female	Indian	25	Master’s Degree/ FDE - Special Needs

C	Mr Govind	Male	Indian	21	BEd Honours - Special Needs
	Mrs Marie	Female	Indian	12	BEd Degree
	Mrs Pillay	Female	Indian	5	BEd Degree
D	Mrs Moses	Female	Indian	11	BEd Honours
	Mrs Joseph	Female	Indian	29	BEd Psychology
	Miss Chetty	Female	Indian	6	BEd Degree
E	Mrs Ndlovu	Female	Black	12	BEd Psychology
	Mr Khan	Male	Indian	8	BEd Psychology
	Mrs Naidoo	Female	Indian	15	BEd Degree
F	Mrs Ngwane	Female	Black	8	BEd degree
	Mrs Hlophe	Female	Black	12	Diploma in Education
	Miss John	Female	Indian	9	BEd Psychology

Table 5.1 – Educator’s Profile

Parents selected for this study was done by purposive sampling. The profile of the interviewees are presented in Table 5.2. Pseudonyms will be used for participants and schools will be alphabetically arranged (e.g., Mr Naicker (P) from school A).

NO. OF SCHOOLS	NAMES OF PARENTS	GENDER OF ASD LEARNER	RACE	MOTHER/ FATHER (Interview)	MARITAL STATUS	EMPLOYMENT STATUS	NO. OF CHILDREN
A	Mr Naicker	Male	Indian	Father	Married	Employed	3
	Miss Jones	Male	Indian	Mother	Single	Employed	2
	Miss Khumalo	Male	Black	Mother	Single	Employed	3
B	Miss Mkhize	Female	Black	Mother	Single	Employed	2
	Mrs Dlamini	Male	Black	Mother	Divorced	Employed	1
	Mrs Moodley	Male	Indian	Mother	Divorced	Employed	1

C	Mrs Maharaj	Male	Indian	Mother	Married	Unemployed	2
	Mrs Sunker	Male	Indian	Mother	Married	Unemployed	2
	Mrs Narain	Male	Indian	Mother	Divorced	Unemployed	2
D	Mrs Jayram	Male	Indian	Mother	Married	Unemployed	2
	Mrs Khan	Female	Indian	Mother	Married	Unemployed	1
	Miss Perumal	Female	Indian	Mother	Single	Unemployed	2
E	Mrs Paul	Male	Indian	Mother	Married	Employed	1
	Mrs Simon	Male	White	Mother	Divorced	Unemployed	1
	Miss Ross	Male	White	Mother	Single	Unemployed	1
F	Miss Shangase	Male	Black	Mother	Single	Employed	2
	Miss Cele	Male	Black	Mother	Single	Unemployed	1
	Miss Zweli	Male	Black	Mother	Single	Unemployed	1

Table 5.2 – Parent’s Profile

5.7.2 Data generation

The process of data generation began in 2019 after ethical clearance was obtained and permission from the Senior Education Manager (SEM) and principals of respective schools were granted. A series of discussions and engagements took place with educators and parents to assess and decipher the challenges that learners diagnosed with autism experience to mitigate such challenges. The tools and techniques used in this study comprised of open-ended semi-structured interviews and observations. Using a variety of methods for the data collection, gave me an in-depth and adequate representation which will enhance this study (Lotame, 2019). Also, the use of a variety of data collection tools

enriches a study and allows for triangulation, which develops a comprehensive understanding of the study. Triangulation is not just about validation but about deepening and widening one's understanding (Better Evaluation, 2018). Thus, the study aims to get a better understanding of ASD to mitigate the challenges that learners diagnosed with autism experience. Also, to provide guidance, assistance, and support to parents, educators, and the broader community in handling learners diagnosed with autism.

I embarked on this study by firstly engaging with the educators from the six LSEN schools (Learners with Special Educational Needs), three schools had learners diagnosed with autism, integrated across the school in the different classes and three schools had learners diagnosed with autism, placed in classes with autistic learners, which is referred to as 'autistic units.' As a researcher, I was able to perceive their perspectives on the stance of integration of learners diagnosed with autism and learners placed in ASD units *per se*, through the open-ended semi-structured interviews and observations, which will be discussed in detail in the data analysis chapter. This entailed engaging with eighteen educators in total from the six LSEN schools. I then retrieved information of three learners with ASD' parent details from each of the six schools. This assisted me in engaging with those parents so that I could get the learners' background information, which included the pregnancy details, birth details, development of the learner diagnosed with autism, especially their milestones, and the diagnosis of the learners with ASD.

I also obtained information on the interventions for learners diagnosed with autism, the support and guidance, if any, that parents received. There were 18 home visits to parents. These eighteen educators and eighteen parents is tabulated under the sampling section of this chapter (5.7.1). Hence, pseudonyms will be used for these eighteen educators and eighteen parents respectively by using fictitious names and the six schools will be alphabetically arranged. The data will be presented over three chapters, namely Chapter Six, Seven and Eight. Each chapter will be fundamentally structured according to the research questions. The data will guide and assist me, as a researcher to ascertain the strategies that educators and parents utilised to mitigate the vulnerabilities experienced by

learners diagnosed with autism. Hence, this is the thrust of the research, and will be detailed in the data analysis chapter (cf, Chapter Nine).

5.8 RESEARCH INSTRUMENTS

5.8.1 Semi-structured interviews

According to DeJonckheere and Vaughn (2018), semi-structured interviews are an effective means of data collection when the researcher wants to collect qualitative, open-ended data to attain participant thoughts, feelings, and beliefs about a particular topic and to delve deeply into personal and sometimes sensitive issues. The purpose of using semi-structured interviews for data collection is to gather information from key informants who have personal experiences, attitudes, perceptions, and beliefs related to the topic of interest (Keller and Conradin, 2019). In this study, I was able to interpret the epistemological view of educators and parents.

(a) Semi-structured interviews with educators

By exploring the experiences of special education educators, through the semi-structured interviews and observations, we can better understand what they know about teaching learners with autism. The proposed study will help to reveal the challenges special education educators encounter and show what is needed to meet those challenges. Identifying these issues and needs will guide, support, and improve ASD programming at schools and educational service districts. The proposed study can also add to a better understanding of the underlying reasons for this gap between research and classroom practice. It will help to close this gap by showing how educators build knowledge and understanding based on their self-efficacy and competence. The educators that were selected for this data production had to be teaching learners diagnosed with autism and registered with SACE (South African Council of Educators). Knowing these educators were permanent and experienced in teaching learners diagnosed with autism gave me the confidence in trusting the veracity of their perspectives.

The interview schedule was designed with the educator in mind as I first-hand noticed some challenges that my colleagues experienced. There were fifteen pre-set questions (Appendix H) that guided the respondent to answer the questions during the interview. The questions were based on educators' experiences and challenges that they encountered with learners diagnosed with autism. Since this was semi-structured interviews with open-ended questions, it enabled me as a researcher, to probe into questions which created diversions, but gave further clarity and understanding in this study.

The interviews were conducted at a convenient time for educators in their classroom setting, where they were less stressed and relaxed so that they were able to answer their questions from an informed position. Educators were given a consent form and they were informed about the study. They signed the declaration form providing permission to undertake the semi-structured interviews, thus participating in this study. Preceding the interview, I explained to the participants that all information that was gathered would be dealt with the utmost confidentiality and that the interview would be recorded and analysed but no names would be disclosed. These interviews were audio-recorded and later transcribed. The transcripts were analysed using codes that will be discussed in the next three chapters.

(b) Semi-structured interviews with parents

Parents were engaged in the semi-structured interviews as learners with ASD were unable to undertake such an interview due to their intellectual disability and communication. Selection bias was evident in that the child's perspective could not be taken in account as a result of their disability. Thus, three parents were selected from the six special needs schools. The interview schedule was designed with the parent in mind. There were ten pre-set questions (Appendix I) that guided the parents to answer the questions during the interviews. The parents in this study were predominantly mothers majority were either single or divorced. The questions were based on the parents' experience and challenges with their ASD child. Although questions were pre-set prior to the interviews, they were

used as a guide only. During the interview, the researcher decided which words to use as well as the order of the questions. Having used the semi-structured interview, I was able to probe further into questions which led to more precise information that I believe can influence this study.

The parents were interviewed at a time and place suitable and convenient for them without any disturbance or interference. This promoted explicit information on their ASD child. They were given a consent form to sign and were apprised of the objective of the study. They then signed the declaration form giving due permission to undertake the semi-structured interviews. Preceding the interview, the researcher explained to the participants that all information that was gathered would be dealt with the utmost confidentiality and that the interview would be recorded and analysed but no names would be disclosed. These interviews were audio-recorded and later transcribed. The transcripts were analysed using codes that will be discussed in the next three chapters.

5.8.2 Observations

Observation is one of the most distinctive features of a research process which allows the researcher to gather live information directly in natural settings (Essays, 2017). Therefore, we can say that observation is one way to gather information directly on what is happening in a school or classroom, or home rather than relying on second-hand. It gives structure and direction to what is observed (Essays, 2017). In this study, observations took place whilst educators were interacting with the learners diagnosed with autism in their classes and I have first-hand observed that educators were highly stressed in their classes as each ASD learner's demands and needs were different which meant adjusting the programmes to suit each learner's abilities and needs. This entailed extra work for educators besides enduring the aggressive behavior from some learners with ASD when they had sensory overload. Then I observed firsthand during my interviews with educators that they were exhausted. Some educators refused the interviews as they were highly frustrated.

I also observed that children on the autism spectrum have difficulty understanding the core curriculum, classroom directions and communicating their needs to educators and peer (Synapse, 2016). Besides, observations gather a lot of first-hand information which can be particularly effective in gathering data when respondents are either unwilling or unable to provide information. Thus, I was able to observe first-hand what happens in a class with learners with ASD.

In this study, I also observed parents interacting with their Children with ASD in their homes during my home visits. Parents find it difficult and embarrassing when their child demonstrates unusual behavior. Brazier (2016) concedes to this as first-hand observation shows the emotions of parents. This was observed in my interview with some parents when I undertook the semi-structured interviews at their homes. Some parents felt ‘overwhelmed,’ angry, and upset, whilst some just blocked it out. This made me realise that some parents still do not understand their child’s condition or are in denial, whilst some had an understanding whereby, they can handle their ASD child to an extent. The researcher’s positionality is important as both an insider and outsider during observation (Heather, 2019). Flores (2018) argues that a researcher needs to be objective but can show empathy during home visits to gain meaningful data, however, needs to realise their professional position in the study whereby he/she has to observe their data as an outsider. With this view, I believe that using observation as a tool for data production will add value to this study, hence an observation schedule was also generated (Appendix J).

5.8.3 Field notes

According to Phillippi and Lauderdale (2017, p. 384), field notes are a means of documenting needed information, especially in this qualitative research. However, they emphasise that while it is widely regarded as essential, there is no guide to field note collection to guide researchers. Thus, in this study, as much as I audio recorded the interviews and made observations, it was essential to make field notes so that precise information could be used when analysing the data. Field notes can supplement

conventional interview data or other techniques of data gathering which can impact the study (Schwandt, 2015). They further elaborated that field notes assist the researcher to remember and precisely record the behaviors, activities, events, and other features of an observation. Hence, the study ranged learners on the lower spectrum of autism who had low cognitive abilities, besides comorbid ADHD, SID, and behavioral issues and it was pertinent to jot down field notes based on my observations. Those details were sometimes the greatest source of information needed when analysing the data.

5.9 VALIDITY AND RELIABILITY OF THE INSTRUMENTS

According to Middleton (2019), validity and reliability are closely related, but they mean different things. A measurement can be reliable without being valid. However, if a measurement is valid, it is usually also reliable. Hence, it evaluates the quality of research and indicates how well a method, technique, or test measures something (Haele, 2015). The study used a variety of instruments, namely semi-structured interviews, and observations, also field notes were made during that process. Through my observations, I realised that participants were more comfortable with the semi-structured interviews as opposed to the questionnaires. It was easier for them to speak about learners diagnosed with autism rather than complete a questionnaire, as some participants, especially parents were already emotional speaking about their child and their experiences.

According to Brazier (2016), parents of children with autism sometimes describe feeling “overwhelmed, guilty, confused, angry, or depressed.” He added that they sometimes feel frustrated especially when their child disregards others and when people do not understand their child. Hence, after considering the challenges that parents may encounter with questionnaires, which would have come back incomplete or blank, I used the semi-structured approach as this deemed more reliable and valid.

5.10 DATA ANALYSIS

Data analysis is a process of cleaning, transforming, and modeling data to discover useful information for decision-making and the purpose of data analysis is to extract useful information from data and taking the decision based upon the data analysis (Sedkaoui, 2018, p. 64). The data analysis journey began by listening to all the audio-recorded interviews and reflecting on the observations that were made and the field notes that were captured during the class and home visits. As a researcher, I listened to the audio recordings many times before starting the transcription process, thus I also transcribed the data independently, although it was a time-consuming process, hence I was able to identify with the field notes and the participants' emotions. Also, a significant amount of field notes were gathered through my observations and the content analysis was useful to use.

Thematic analysis is a research tool used to determine the presence of certain words, themes, or concepts which can quantify and analyse the presence, meanings, and relationships of certain words, themes, or concepts (Mailman, 2019). The data was manually captured, and the content analysis assisted the researcher to interrogate the data into codes and themes. It assisted to summarise and refine my data. The process of coding helped to generate ideas, identify patterns and theories in the transcripts (Adu, 2016). The data analysis process will give meaning to this study which will have a significant impact on the findings, conclusion, and recommendations in this study. This will be further discussed in the next chapter.

5.11 ETHICAL CONSIDERATION

Ethical consideration is an important component of research as many ethical challenges can emerge when engaging participants in qualitative research approaches (Woodgate et al., 2017). It is therefore imperative to keep all participants informed at all stages of the study. Some important ethical concerns that the researcher considered was anonymity, confidentiality, and informed consent (Arifin, 2018). The researcher had to

assure the participants of anonymity and confidentiality through informed consent. They were given informed consent forms and they had the choice to participate or decline. The journey of this study started by seeking permission from the Head of Department of Education (Appendix C), the Senior Education Manager of the Pinetown district (Appendix D), the school principals (Appendix E), educators (Appendix F), and parents (Appendix G). Participant's consent was obtained after a thorough explanation of the research process. After declarations were signed indicating voluntarily participation, the researcher proceeded with this study. Ethical procedures of the University of KwaZulu-Natal were followed to ensure that the research was completely ethical. However, ethical clearance was delayed due to contextual factors, however, I waited as I planned on persevering with my study.

5.12 TRUSTWORTHINESS

The trustworthiness of research is based on the credibility (internal validity), transferability (external validity), confirmability (biasness of study), and dependability (reliability) of the findings (Chowdhury, 2016). I endeavoured to attain trustworthiness by generating an intensive description of the study, also by involving peers to undertake critical checks. These intensive descriptions involved the multiple vulnerabilities experienced by learners diagnosed with autism. Also, I used audio recordings during the interviews, to ensure that all data was captured accurately which ensured the trustworthiness of the study. Furthermore, I had a peer assistant cross-checking the transcripts which ensured the trustworthiness and credibility. The alchemy of the crystallisation process is the complex journey of enriched discovery (Stewart, Gapp, Harwood, 2017) and in this study, the crystallisation process took place through interviews and observations which gave rigor and openness and enriched this study. This also assisted in answering the research question thus, providing trustworthiness in this study.

Consequently, confirmability is the last criterion for trustworthiness that a researcher needs to establish (Chowdhury, 2016). This involves how confident and determined the

researcher is in her findings based on the participants' responses and not any potential bias or personal motivations of the researcher. This is only possible by gaining the 'trust' of the participants as the researcher shared no prior relationship and had no knowledge of their whereabouts. Thus, it was critical to building trust and an ethical relationship with them by highlighting the objective of this study. The participants that undertook the semi-structured interviews were educators and parents. The researcher assured all participants' that all data that was collected and recordings thereof would be treated with strict anonymity and confidentiality as per the University ethics. Thus, in this way, I was able to obtain the trust of the participants which prompted me to proceed with the study with absolute confidence.

5.13 LIMITATIONS

Limitations of a study are its flaws or shortcomings which could be the result of the unavailability of resources, small sample size, and flawed methodology (Editage Insights, 2019). A study of this nature is bound to have limitations especially since this study involves vulnerabilities of learners diagnosed with autism and some of the vulnerabilities of ASD are communication and socialisation. Thus, the sampling did not include direct perspectives from learners diagnosed with autism as they ranged on the lower spectrum of autism thus inhibiting their communication. In this study I tried to control my own bias by using multiple sources and methods for data collection which allowed me to pursue the findings.

5.14 CONCLUSION

This chapter highlighted the purpose of the study, the researcher's positionality, research design, and methodology. Within the research design, I mentioned the use of the interpretive-phenomenological paradigm which was suitable as I assessed the perspectives and experiences of the educators and parents of learners diagnosed with autism. The components of the paradigm were discussed thereof. The research method entailed the sampling process where the data collection and data analysis were briefly outlined. The

participants in this study were purposively selected. They were given fictitious names which is tabulated in the data presentation chapter (Chapter Six). In addition, the ethical considerations and limitations were also discussed. The next three chapters highlight the presentation of the data, hence each chapter will be structured in relation to the research questions.

CHAPTER SIX - DATA PRESENTATION – THEME 1

TYPES OF VULNERABILITIES EXPERIENCED BY LEARNERS DIAGNOSED WITH AUTISM

“To measure the success of our societies, we should examine how well those with different abilities, including persons with autism, are integrated as full and valued members.”

Ban Ki-Moon, Former United Nations Secretary-General (2020)

6.1 INTRODUCTION

The preceding chapter encompassed a detailed presentation of the research design and methodology that underpinned this study. In this chapter, I present and discuss the data that was generated through the process of interviewing three educators and three parents of learners with ASD from six special needs schools. The data will provide *verbatim* quotations to ensure that the ‘voices’ of the participants are pristine in this study. For the purpose of the study the six schools will be alphabetically arranged, and the three educators and three parents will be given fictitious names. The names of educators and parents were selected based on recommendations from principals who directed me to the potential participants. The staffing component at those respective schools were predominantly Indians which leads to majority participation from Indian participants.

Furthermore, in this qualitative study I used the interpretivist-phenomenological paradigm and more than one data collection method which enhanced the credibility of the research (Amsterdam Quality Health, 2017). The interviews and observations were guided by an interview and observation schedule, respectively. Educators and parents were able to speak freely, and I was able to probe into further questions and discussions with educators and parents during the interviews. I was also able to gain more information through observations that took place during class visits with educators and parents when I undertook the home visits, thus I gleaned lots of information on learners diagnosed with autism. Field

notes that I made during my observations, interviews with educators and parents and the photographs that I took during the observations allowed me to specifically document all my observations, perceptions, and views during each step in the research process. Hence, the data analysis will comprise of three themes, which includes sub-themes, however each theme will be discussed in detail in three different chapters which will be structured in relation to the research questions. I will begin my discussion on data generation by presenting my three key questions of this research and my interview profile with educators and parents.

The three key questions are:

- What are the vulnerabilities experienced by learners diagnosed with autism?
- What challenges do educators and parents experience in the teaching and learning of learners diagnosed with autism?
- How do educators and parents mitigate these vulnerabilities?

6.2 PROCESS OF DATA ANALYSIS

The process of data analysis was done by following the five steps of qualitative data analysis, which is (1) Prepare and organise your data, (2) Print out your transcripts, gather your notes, documents, or other materials, (3) Review and explore the data, (4) Create initial codes - review those codes and revise or combine into themes, (5) Present themes in a cohesive manner (Akinyode and Khan, 2018). My data sources for this analysis included semi-structured interviews with parents and educators as presented in the above tables and observations in class and home visits. According to Akinyode and Khan (2018), the whole process of converting 'raw' data to final patterns of meaning is a critical process of research hence, it guided me in critically evaluating and making meaning of the data. The details of the process were discussed in the previous chapter, however, for the purpose and understanding of this chapter, I will diagrammatically present the process of the data generation by reflecting the thematic analysis which starts with coding. Coding, according

to Rosala (2019) describes what the text is about and is a shorthand for more complicated information, adding the researcher's interpretive lens to it. It is thus descriptive and interpretive.

THEMATIC ANALYSIS

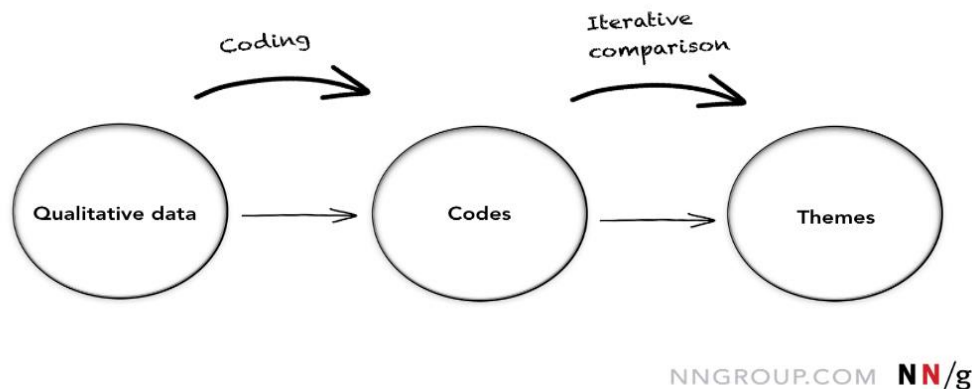


Figure 6.3: Thematic Analysis (Adapted from Rosala, 2019, p. 7)

The diagram shows a systematic process of comparing segments of text within and between codes from which the researcher derived themes (Rosala, 2019). For the purpose of this study, I have applied the thematic analysis to analyse transcript data that emerged from the interviews and observations to create a comprehensive and systematic record of the codings and themes. Furthermore, I identified the themes in transcript data from participants with an attempt to confirm, verify and expand these themes, and repeat the procedure to find new themes. Hence, these themes will be used in the organisation of this chapter which will be fundamentally structured in line with the research questions.

6.3 DISCUSSION OF THEMES FOR DATA PRESENTATION

Theme identification is one of the most fundamental tasks in qualitative research which summarises the information related to a particular topic or data domain (Mohajan, 2018). These themes are extracted from the data collection based on the interviews and observations that were undertaken by using a variety of techniques. According to Maguire (2017), these techniques are based on (1) an analysis of words (word repetitions, key-indigenous terms, and key-words-in contexts); (2) careful reading of larger blocks of texts (compare and contrast social science queries, and searching for missing information); (3) an intentional analysis of linguistic features (metaphors, transitions, connectors); and (4) the physical manipulation of texts (unmarked texts, pawing, and cut and sort procedures).

This study is aimed at mitigating the multiple vulnerabilities that learners diagnosed with autism experience and based on all these techniques, the following themes were extracted which will assist in analysing and interpreting the data. Furthermore, these themes were formulated in line with the research questions which will be discussed in detail in the different chapters:

1. Types of Vulnerabilities, such as Personal Vulnerabilities, Social Vulnerabilities, and Educational Vulnerabilities, Gender and Vulnerabilities, Race and Vulnerabilities (Chapter Six)
2. Challenges experienced (Chapter Seven)
3. Mitigation of Vulnerabilities (Chapter Eight)

RESEARCH QUESTION 1

What are the vulnerabilities experienced by learners diagnosed with autism?

6.4 THEME 1- TYPES OF VULNERABILITIES EXPERIENCED BY LEARNERS DIAGNOSED WITH AUTISM

Vulnerabilities within the context of special needs education, according to the Winford Centre (2015), means to be susceptible to being harmed or hurt. All children are vulnerable but those with special needs or disabilities, such as autism are considered even more vulnerable since they experience difficulty in expressing themselves, coping with their daily lives, and doing things independently (World Health Organization, 2019). The data from this study revealed that there are various forms of vulnerabilities that autistic learners experience. I have sub-categorised these into three distinct forms. These sub-categories are personal vulnerabilities, social vulnerabilities, and academic vulnerabilities. Each of these sub-categories will be engaged within three sub-themes under each theme.

6.4.1 Sub-Theme 1: Personal vulnerabilities experienced by learners diagnosed with autism

According to Innes (2015, p. 3), personal vulnerabilities result from an individual or group's characteristics, identity, or status. In effect, certain individual characteristics shape susceptibility to being negatively affected by a victimisation experience, for example, mental or physical health status (World Health Organization, 2019). learners with ASD in this categorisation of learners are on the lower trajectory of autism which affects their mental ability, thus inhibiting their learning and development, socialisation, and communication (Saggers, 2016). Personal vulnerabilities may be difficult to identify as it is sometimes regarded as normal behavior (National Autistic Society, 2020). Normal behaviors are more context-bound, hence in this section, I present the educators' perspectives of personal vulnerabilities as experienced within their classroom context and then present the parents' perspectives, who experience these vulnerabilities in their children within the home context. Separating the contexts within which autistic learners express their personal vulnerabilities allows me to illuminate how different contexts enables the identification and expression of vulnerabilities by autistic learners in different ways. For

example, transition fears within autistic learners may be identified differently across home and classroom contexts, and the management thereof may require different approaches. The educators in this study have identified four kinds of personal vulnerabilities experienced by learners diagnosed with autism.

Transition vulnerabilities have been noted in learners diagnosed with autism. Changes in the environment have been identified as a cause of transition vulnerabilities.

Miss Geeta (E) from School A mentioned “...*when they come to school, they tend to scream out loud and jump around...*”

Mr Khan (E) from School E said that “...*it’s quite a struggle to get these learners with ASD settled in class. They have high anxiety levels, they tend to cry and are clingy, they hold onto your leg...when you push them away...they tend to bite and hit... but eventually, we manage to settle them down over time...*”

Miss Geeta (E) from School A, also mentioned, “...*when she comes to school, she tends to scream and cry...we would give her the nuts and almonds which her mum used to send everyday...that used to help her calm down...*”

From the data presented educators struggle to get these learners with ASD settled in class. Their anxiety levels are to an extreme, they tend to “*scream*” and stim resulting in meltdowns. Learners diagnosed with autism not only find the physical class overwhelming but also the learners, staff, and the school *per se* as these are all unfamiliar to them (Saggers, 2016). According to Bolourian et al. (2019), the transition to early schooling is a crucial milestone for all children, one that can particularly be challenging for young children with ASD.

Miss Geeta (E) from School A made a significant observation of how “*nuts and almonds*” would calm a learner when she was in unfamiliar places, such as school. Learners diagnosed

with autism become so accustomed to their home environment that they find the transition to school overwhelming, thus posing an enormous amount of pressure to adapt quickly to new settings which can cause a strain on the child's physical and mental health (Nuske, 2018). Mr Khan (E) from School E stated "*...that once these learners are introduced to structure and routine then they eventually settle in...*"

Another personal vulnerability that educators identify in learners diagnosed with autism is environmental stimuli that are disturbing to the autistic learners. Mr Krishna (E) from School A mentioned "*...a learner from my class does not like the noise level in class so he sticks his fingers in his ears or sometimes bangs his head on his desk. These learners cannot tolerate loud sounds and noises...*"

According to Mrs Marie (E) from School C, "*...when they engage with the other learners during the sporting activities and training, they get violent...they want to hit the other children.*"

The third vulnerability is related to sensory issues in learners diagnosed with autism. This means that if there are some changes in smell and taste, then autistic learners react to these changes. Mr Govind (E) from School C mentioned, "*...a learner from my class took his lunch and flung it on the floor after he took a bite of it, hit the other children...upon checking the lunch, he gauged that his mum sent something that he did not like... he phoned his mum and she confirmed that he does not eat that, and the caregiver made his lunch...*"

The educator went on further to say that "*...one day the class assistant gave another child coffee...and he only drinks milo which she didn't know... he threw that hot enamel cup of coffee on the other children...I also had to take cover because he became so violent...*"

Mr Khan (E) from School E mentioned "*...he doesn't like the smell of his peer's lunch, so he starts spewing...*"

Learners diagnosed with autism experience sensory processing issues that affect their taste, smell, touch, and hearing (Arky, 2020). The above data is indicative of some of the sensory issues that educators' have to deal with in class. These vulnerabilities can also place educators in challenging situations as they need to protect the safety of the other learners when learners experience their meltdowns due to their sensory changes.

The fourth vulnerability experienced by learners diagnosed with autism is personal care vulnerability.

Mrs Hlophe (E) from School F mentioned *"...my learner still can't go to the toilet by himself, mum sends him with nappies, but I am trying to toilet train him..."*

She further elaborates that, *"This child is 8 years old and is still not toilet trained. Lots of time is spent working through his Individualised Plan in ensuring that he gets toilet trained"*.

Mrs Marie (E) from School C mentioned that *"... learners with ASD experience lots of challenges with their meals training and their toileting...I feel that these are their greatest challenges..."*

She also stated, *"... being able to eat on their own...learner used to only eat Nik Nak chips but eventually, we started introducing bread and then sandwiches...it seems to be working slowly..."*

She further indicated *"... and the toileting was a challenge with a female learner...she used to come to school wearing her nappies...I used to sit with her in the toilet with picture cards trying to toilet train her, and as soon as I brought her back to the class, she would mess herself... so it was very challenging..."*

Those were the vulnerabilities that educators in this study struggled through, in the process of self-care which accentuated the challenges that learners with autism experience within a classroom context. According to the National Autistic Society (2017), developing self-care skills such as washing and personal hygiene can sometimes be an issue for people on the autism spectrum and if they have sensory differences, such as a heightened sense of smell or touch, washing may be an uncomfortable experience.

I now present the similar challenges that learners with autism experience from a parents' perspective within the home context. Reviewing parents' views on their child's vulnerabilities, there seem to be similar kinds as those exposed by the educators. For example, one challenge was change of environments as noted by parents, especially moving away from familiar environments or in environments where there are a lot of people, many of whom may not be part of the child's usual encounters.

Mr Naicker (P) from School A said that his son “... *had temper tantrums at supermarkets ...he would scream and block his ears...*”

He further elaborated, “...*he didn't like attending family functions...he would hit us and pull us around...I used to get tired of him as I did not understand what he wanted...also he was a very chubby child, I could not manage to carry him around...*”

Miss Jones (P) from School A mentioned, “...*we couldn't take him to malls...he would scream and cry ...He didn't like the crowd and noise at the malls...*”

Mrs Maharaj (P) from School C indicated, “...*we took him to an entertainment area, he screamed and screamed until he got his pacifier, he is now 13 years and he still looks for his pacifier when we take him out of the house...*”

Mrs Paul (P) of School E “...*whenever we took him anywhere...he would grab a spoon before we leave home...if he didn't have it, he would get very upset...that spoon used to be his source of security and comfort...*”

Mrs Jones (P) from School A and Mrs Paul (P) from School E made very crucial observations, that of something that the Children with ASD find security and a source of comfort with (e.g., *pacifier, spoon*) as a means of calming the child in such situations. This observation will be discussed later in this chapter.

Mrs Maharaj (P) from School C further elaborated “...*when he went to school, I experienced challenges with him at school... He would scream and cry...tear his books and shoes...we went through many pairs of shoes...*”

Mrs Khan (P) of School D mentioned that “...*when she went to the clinic it was challenging...she didn't want to be there...she would scream and have a meltdown...the security had to hold her down...*”

According to Hume (2018), learners with ASD experience greater difficulty in shifting attention from a change in routine due to greater need for predictability, challenges in understanding different environments, or difficulty when a pattern is disrupted. Hence, changes in routine would, as this study also shows, initiate reactions alluding to environmental change vulnerabilities.

The vulnerability associated with sensory issues like smell and taste were also noted by parents.

Mrs Khan (P) of School D mentioned that “...*she's a very picky eater... it's very challenging with her food. If she doesn't like something, she would get upset. She prefers to eat the same food every day.*”

Mrs Khan further mentioned “...*she used to eat sand, stones and bite the wall...*”

Mrs Jayram (P) of School D mentioned that “...*he used to gag over certain foods...especially cheese...he didn't like the taste and smell of it in the pizza...*”

She further elaborated that ‘...*he used to like crunchy foods...*’

She also mentioned that “...*although there was a veld fire far away...which he wouldn't see he would say...smoke...smoke...I couldn't understand how he would get that smell...*”

The sensory issues that play out as vulnerabilities in autistic learners may either sharpen their senses (*although there was a veld fire far away...which he wouldn't see but he would say...smoke...smoke*), or would respond differently to “normalised” smell and taste (*he used to gag over certain foods...especially cheese...he didn't like the taste and smell of it in the pizza*), or crave for unedible stuff like *sand and stones*. These kinds of responses by autistic learners may indicate challenges with sensory processing.

Mr Naicker (P) from School A mentioned “...*my son would take off all his clothes in the supermarket...he didn't like the label on the inside of his clothes...if I didn't cut it out...he would either strip off his clothes or throw a tantrum...*”

According to Raisingchildren (2017) children with ASD can be oversensitive or under-sensitive to noise, light, clothing, and temperature, thus their senses, such as their sight, smell, touch, hearing, and taste, take in either too much or too little information from the environment around them. The child who is not very communicative may not be able to articulate exactly why he does not like his textured clothing, especially the *rough-edged label on the inside of his clothing*, thus this can affect his behavior (Total Spectrum, 2019). The data presented was quite indicative of the sensory sensitivities that learners diagnosed with autism experience.

Personal care is another vulnerability that teachers and parents have noted in their observations of the learners who present themselves as autistic.

Mr Naicker (P) from School A mentioned, “...*toileting was delayed... he only toilet trained at 12 years old...*”

Mrs Sunker (P) from School C explained “...*I couldn't understand why he was so afraid of the toilet...he just did not want to use the toilet on his own...I sat with him in the toilet for hours...he hit me ...I cried but I was determined to toilet train him...as there was lots of pressure from family and friends... that he is 4 years old and still wears nappies...*”

Mrs Jayram (P) from School D said that “... *he battles with his bathing...waits for me to bath him...*”

(a) The personal care vulnerability was quite daunting on parents besides the learners with ASD. According to Helm (2020), children with ASD or other special needs, however, may have a more difficult time developing healthy hygiene habits because they lack the necessary skills and/or are sensitive to the stimuli associated with these tasks. My observations also conform to the observations of the teachers and parents. These include: *They also don't like the sound of the school buzzer and noise in class. Saw a learner stick his fingers in his ears.*

(b) *They don't partake in the school meals training programme*

(c) *Some of the learners with ASD don't like to go to the toilet, I saw class assistants forcing them into going to the toilet.*

Home observations included:

(a) *As I was speaking to the mum of the ASD child, the child's father asked the child to accompany him to the shop and he refused to go.*

- (b) *Noticed when the sound of the television was high, the child would scream and jump on his seat.*
- (c) *I witnessed a child flinging his meal on the floor and hitting his mother after taking a bite of his food.*
- (d) *Watched an 8-year-old ASD child sit in the bathroom naked waiting for his mother to bathe him ...”*

Drawing from the data presented it seems that personal vulnerabilities in autistic learners are consistent irrespective of being at school or home. These personal vulnerabilities seem to be intrinsic to the autistic learner and may manifest in different situations. This key finding therefore suggests that individuals in familiar environments like home and school should be aware of these personal vulnerabilities with a view to either preventing disruption to that environment or to anticipate possible behavior patterns of learners presenting with autism to minimise its impact on the learner.

6.4.2 Sub-Theme 2: Social vulnerabilities experienced by learners diagnosed with autism

According to Zimmermann (2017, p. 5), social vulnerability refers to potential harm to people whereby it involves a combination of factors that determine the degree to which someone's life and livelihood are put at risk by a discrete and identifiable event in nature or society. Social vulnerabilities in learners diagnosed with autism relate to intent in language and cognitive deficits resulting in an ASD child being inept and naïve compared with a typically developing child (Cohen, 2016). This central deficit in social interaction means that children diagnosed with autism lack social intelligence, which is described as the capacity to ‘understand interpersonal situations’ and transactions and to use that understanding to assist one in achieving desired interpersonal outcomes (Sivaratnam, et al., 2015). The data presented social vulnerabilities that become noticeable in learners diagnosed with autism as they are *aloof and socially withdrawn*, which of course is not normal behavior. From this preamble, I present the educators’ perspective of social

vulnerabilities of learners diagnosed with autism within the classroom context, the parents' perspective within the home context, and the researcher's observations within the class and home contexts. Separating the contexts within which autistic learners experience social vulnerabilities will highlight the identification and expression of vulnerabilities by autistic learners in different ways. For example, the social interaction at home might be different from school settings, thus this may enable different approaches. The educators in this study have identified three kinds of social vulnerabilities, the inability to make friends, bullying, and behavioral problems.

The first vulnerability that learners diagnosed with autism experience is the inability to make friends. Mr Krishna (E) from school A mentioned, "*...he has difficulty in social and emotional skills...difficulty in maintaining relationships and making friends...*"

Miss Chetty (E) from School D stated that "*... I noticed that they don't get along with each other...some of them can't see eye to eye...it's a tit for tat with them...*" She further elaborated that "*...some of them can't really gel... so they can't make friends...also they won't freely go and make friends...*"

Miss Geeta (E) from School A explained "*...they don't like being with other children they prefer to be alone...*"

Miss Chetty (E) from School D made a significant observation, "*they won't freely go and make friends.*" This is indicative that learners with ASD are not very receptive to other learners as Mr Krishna (E) from School A stated that they have "*difficulty in making friends*", and they "*prefer to be alone.*" From the literature (National Autistic Society, 2018), learners with ASD prefer to be on their own and enjoy their own company, as they lack the skill and confidence in engaging with others. Educator 3.4. mentioned that "*they don't gel very well*", this happens when children on the autism spectrum have trouble reading social cues, which could cause confusion and awkwardness among the child and their peers (Applied Behaviour Analysis, 2019). The lack of confidence and skill in making

friends can diminish learners with ASD' capacity to interact in social situations and contribute to negative interpersonal experiences, such as victimisation and exploitation (Petersilla, et al., 2019). This victimisation leads to another vulnerability, which is bullying.

Bullying is the second social vulnerability that learners diagnosed with autism experience. Miss John (E) from School F indicated that these learners with ASD, “... *get teased...they become victims of bullying...they become socially isolated...*”

Mr Krishna (E) from School A mentioned that, “...*after the break, I noticed he was withdrawn but fidgety and agitated...I approached him, he told me that another child was hitting and slapping him...bullying him...asked him what he did...he said he didn't do anything.*”

He further elaborated, “...*when I investigated the matter, he told me that the other learner hit him because he didn't want to play with him...*”

Miss John (E) from School F alluded to the social isolation of learners with ASD being attributed to learners with ASD being teased, tantamounting to emotional abuse, and in some cases being physically assaulted as Mr Krishna (E) from School A stated “...*he told me that another child was hitting and slapping him...bullying him...*”

Fortunately, this learner with autism was verbal and could express himself so the educator could intervene. Some learners with ASD are verbal but are submissive and timid and they seldom retaliate whilst many learners with ASD are non-verbal, thus they cannot express themselves (Saggers, 2016). Those cases of emotional and physical abuse do not get reported. Therefore, such learners exhibit disruptive or even aggressive behavior (breaking things, hitting others, or harming him or themselves), which leaves educators to decipher the cause of the disruptive behavior (Smith, et al., 2019).

Behavior problems, such as anger or aggression are the third vulnerability that learners with autism experience.

Mr Govind (E) from School C stated, “...*he’s non-verbal... he will pull the other children’s hair, scream and cry...*” He further elaborated that, “...*he would bite and hit us whenever we tried to intervene...*”

Mrs Singh (E) from School B mentioned, “...*the other learners will pick on her and laugh at her in class because she would babble or make funny sounds... so she would sometimes withdraw and sometimes she would run out of the class... scream and cry... hit me when I go to fetch her...*”

Learners that are non-verbal have difficulty in reporting when other learners tease or bully them resulting in anger as stated by Mrs Singh (E) from School B. Fitzpatrick *et.al.*, (2016) states that aggression is generally characterised as behavior that is threatening or likely to cause harm and may be verbal (e.g., threatening another person) or physical (e.g., hitting, biting, or throwing objects at another person). A person can demonstrate one form of aggressive behavior or many, with variable frequency, intensity, and duration (Tonello, et al., 2018). The anger and aggressive behavior presented in the data manifested in these learners with ASD as a result of interference from someone or somewhere and due to the inability of reporting or retaliating in such circumstances, they tend to displace their aggression in different ways. Boys tend to exhibit aggression more frequently than girls (Fitzpatrick, et al., 2016). Those were some of the vulnerabilities that educators experienced with autistic learners in a school setting.

In the next section I present similar challenges that learners with autism experience from a parents’ perspective within the home context. The evaluation parents views on their child’s vulnerabilities affirms that there are similar kinds as those unveiled by the educators. For example, social isolation was noted by parents as well.

Miss Cele (P) from School F mentioned, “...*he likes to stay alone...*”

Mrs Khumalo (P) from School A alluded to similar, “...*he likes to play on his own...*”

Mrs Paul (P) from School E stated, “...*he only plays with my friend’s son ...I guess that’s because he knows him...*”

Mrs Sunker (P) from School C said, “...*he withdraws when we get any visitors...*” She further elaborated that “...*he runs away to his room when anyone comes home...*”

Mrs Paul (P) from School E made a crucial observation, in that learners with ASD experience social isolation, such as they are only comfortable in socialising (short periods) with known or familiar people, otherwise they isolate themselves (*prefer to be alone*) as Miss Cele (P) from School F stated. According to the National Autistic Society (2018), many autistic learners can experience social isolation and find social situations difficult, although some of them may know intuitively how to communicate and interact with each other but struggle to build rapport with people. The data also presented that Children with ASD tend to appear *withdrawn* around people and prefer to play alone, as they have difficulty trying to understand what others mean and how to behave around people can be bewildering, exhausting, and stressful for autistic children (National Autistic Society, 2020).

Another social vulnerability experienced by learners diagnosed with autism that was noted by parents are behavioral issues, especially in social settings.

Mrs Narian (P) from School C mentioned, “...*each time we took him somewhere...the moment he sees people, he will scream and roll on the floor...*” She further elaborated that, “...*he would get aggressive and hit us...we used to get tired with him, but we persevered...*”

Miss Perumal (P) from School D mentioned, “...*she doesn't like when strangers talk to her...she starts screaming...*”

The behavioral issues that the learners with ASD displayed during outings with parents were very exhausting and concerning for parents diagnosed with autism. Parents were unable to decipher the *aggressive behavior* that their Children with ASD displayed especially when they are around *strangers*, however, *parents still persevered* in their quest. From the literature (Stuart, 2017), Children with ASD find it very difficult to cope in social situations, it is perhaps the reaction of strangers, the noise, or the unfamiliar faces that makes everything fraught and complicated for children with autism, thus manifesting in behavioral problems. My observations also correlated with that of the educators and parents, such as:

- (a) *They don't partake in the morning ring activities.*
- (b) *They sit alone during the break.*
- (c) *I witnessed an ASD child being bullied whereby another child took his pen forcefully which made him angry...he screamed and started banging his head on his table...the class assistant saw that and made that child return the pen.*

Home observations included:

- (a) *When she went home, I noticed she ran up to her room and stayed there...her mum said she stays in her room...they take her meals to her room.*
- (b) *Noticed a child run into his room when some visitors came to the house.*

Drawing from the data presented, social vulnerabilities in learners diagnosed with autism are consistent irrespective of them being at school or home. These social vulnerabilities are intrinsic, and their manifestations thereof can take place in different situations and settings. These key findings, therefore, suggest that there should be an awareness and creation of social engagement from an early age for them to be tolerant of their settings, situations, and

the people around them, which will enhance their social confidence. Furthermore, the responses of learners with ASD in this study vary, some learners with ASD become aggressive, whilst some are non-verbal and withdrawn.

6.4.3 Sub-Theme 3: Educational vulnerabilities experienced by learners diagnosed with autism

According to Synapse Reconnecting Lives (2016), the educational vulnerabilities of ASD impacts areas of development such as verbal and nonverbal communication, imaginative or creative play besides all other areas of learning and development. Children on the autism spectrum may have trouble understanding or communicating their needs to educators and peers (National Institution for Deafness & other Communication Disorders, 2018). From the data, learners with ASD have difficulty understanding some classroom directions and instruction, along with subtle vocal and facial cues of educators. The educational vulnerabilities manifest in learners with ASD at school and at home, hence I present the educational vulnerabilities experienced by learners diagnosed with autism from the educators' perspectives at school, parent's perspectives at home, and researcher's observations that were made at school and during home visits.

Separating the contexts within which autistic learners express their educational vulnerabilities allows me to illustrate how different contexts allows for the identification and expression of vulnerabilities by autistic learners in different ways. For example, ways of communicating with autistic learners may be identified differently across home and classroom contexts, and the management thereof may require different approaches. The educators in this study have identified three kinds of educational vulnerabilities, such as speech delays or non-verbal, communication, learning, and development.

Speech delays or non-verbal has been noted as the first educational vulnerability of learners diagnosed with autism.

Mrs Moses (E) from School D mentioned, “...*some autistic learners are non-verbal and cannot tell you when they want anything...this becomes so difficult to decipher if they want something or if they are in pain...*”

Mrs Pillay(E) from School C, stated “...*learners are non-verbal and it's quite a challenge to get through to them...also besides them being non-verbal, they also have cognitive challenges which makes it more difficult to communicate ...*”

Mrs Joseph (E) from School D mentioned, “...*delayed speech in some of our learners...as much as I incorporate pictures and sign language in lessons...some of them have minimal speech but it is not clear and some of them don't have any speech so when I engage in my lessons with them, they somewhat seem disinterested...sometimes they get frustrated...they have meltdowns.*”

It is explicit in this data that learners with ASD with delayed speech and those that are non-verbal compounded by cognitive challenges experience difficulty with communication and understanding. According to literature (National Institution for Deafness & other Communication Disorders, 2018) learners diagnosed with autism who are non-verbal or have delayed speech problems, also show signs of inattentiveness and disinterest. Furthermore, without meaningful gestures or other nonverbal skills to enhance their oral language skills, many learners with ASD become frustrated in their attempts to make their feelings, thoughts, and needs to be known, hence they may act out their frustrations through vocal outbursts or other inappropriate behaviors (Raisingchildren, 2017).

Mrs Pillay (E) from School C stated that “...*learners are non-verbal, and they somewhat seem disinterested in lessons...some of them get frustrated and result in meltdowns*” is indicative that although these learners with ASD seem disinterested in lessons and get frustrated at times, educators still endeavor to use different means of communication to teach them, such as pictures and sign language (Ansley, et al., 2018). Each ASD learner has their own set of demands and challenges thus educators approach each learner's

challenges differently intending to fulfill their learning outcome (Saggers, 2016). The data indicates that non-verbal learners with ASD, especially those that have cognitive challenges experience challenges with learning. Arising from speech vulnerabilities, educators identified communication issues as another educational vulnerability experienced by learners diagnosed with autism.

Mrs John (E) from School F stated “... *they tend to cry as they unable to communicate exactly what they are feeling and what they are going through...*”

Mrs Ndlovu (E) from School E stated, “...*communication is challenging...sometimes they do a little of their work and sometimes they get upset and cry ...also hit other children...*” She further elaborated that “...*some are verbal, and some are non-verbal...although we use pictures and gestures...they still find it difficult to understand...*”

Mrs Pillay (E) from School C mentioned, “...*the inability to communicate can be difficult to know what is happening to an ASD child...we at this school are very vigilant but my concern especially those that are non-verbal and are on diapers...they need someone to change them...if they are at home or going out with family...this can lead to sexual abuse at some point...*”

Miss John (E) from School F stated, “...*some of the learners get teased and bullied...which they cannot report because of their communication problems....*”

The data presented educators who vetted the inability of communication makes it difficult for learners with ASD to communicate their needs (Raisingchildren, 2017). Mrs Ndlovu (E) from School E stated “...*although we use pictures and gestures...they still find it difficult to understand...*” This educator was critical in saying that educators endeavor to use the picture exchange communication system (PECs) and sign language to teach learners with ASD to communicate. However, Mrs Pillay from School C made a very concerning statement in saying that “*the inability to communicate especially those in diapers need to*

be changed at home by family members, this could lead to sexual abuse” of learners with ASD. In addition, Miss John of School F mentioned that *“due to communication problems, learners cannot report when they get teased or bullied”*, thus their ability to communicate is largely dependent on their intellectual and social development (National Institution for Deafness & other Communication Disorders (NIDCD), 2018). Hence, some learners with ASD may not be able to communicate using speech and language, and some may have very limited speaking skills, besides the inability to understand body language and the meanings of different vocal tones (Rudy, 2019).

The third vulnerability is the learning and development experienced by learners diagnosed with autism from the educators' perspective.

Mr Khan(E) from School E mentioned, *“...I have noticed that autistic children experience problems with their gross motor and fine motor development...they need lots of repetition and motivation to learn a skill...”*

Miss Chetty(E) from School D stated, *“...they get frustrated and overwhelmed when they can't grasp concepts...”*

She further elaborated, *“...they can't read or write very well ...they get agitated when they don't understand their work...they would crumble up their work and throw it in the bin...sometimes end up in meltdowns...”*

The data presented a very concise reflection of the learners with ASD' learning and development. Miss Chetty (E) from School D mentioned that these learners would get *“frustrated and overwhelmed when they can't grasp concepts”*. According to Kemp, et al. (2019), learners diagnosed with autism see, hear, and understand things differently which can lead to trouble with learning new information and skills, and putting them to use. The most common types of learning disabilities involve problems with reading, writing, maths, reasoning, listening, and speaking (Learning Disabilities Association of Hilton-Hamilton,

2019). Difficulty with joint attention can also make it challenging for these children to learn skills like taking turns, interpreting facial expressions, or keeping to the topic of a conversation, or even keeping in tune with the lesson *per se* (Hale, 2018). The data elucidated the impact learning vulnerabilities have on learners with ASD and the findings thereof, was that learners with ASD feel frustrated, thus they require lots of motivation, reassurance and reinforcements. Those were some of the educational vulnerabilities experienced by learners diagnosed with autism from the educators' perspectives.

The following are educational vulnerabilities experienced by learners diagnosed with autism from parents' perspectives.

Speech vulnerabilities experienced by learners diagnosed with autism.

Mr Naicker (P) from School A stated, “...*he had delayed speech...fortunately he went daily for therapy which helped him with his speech...*”

Miss Shangase (P) from School F mentioned, “...*he is 6 years old, and he still does not have speech...*”

Mrs Moodley (P) from School B stated, “...*he is non-verbal...he communicates using sign language and writes on your hand...*”

She further elaborated that, “...*he has a specific sound for yes and no...*”

The data presented some learners with ASD did not reach this milestone as typically developing children. A parent mentioned that, “*he is 6 years old and has no speech...*” Whilst that parent waited up to the age of 6 years old, some parents recognised the communication vulnerabilities early and found ways to cope with them. For example, one parent sought therapeutic support, some found alternate ways of communicating like

writing on the hand. Communication vulnerabilities are quite easy to recognise in learners with ASD and therefore more noticeable as a vulnerability.

Another parent Mrs Maharaj (P) from School C mentioned that “...*he reached all his milestones normally at 2 years old, including speech...however he lost his speech when he underwent his tonsillectomy at two and half years old and it was around the same time that he went for his DTP injection...it was absolutely challenging...*” She went on to say, “...*I feel it was after the DTP vaccine that he lost his speech...*” She further elaborated that “...*I noticed he won't respond or look at me when I used to talk to him....so I took him to the pediatrician who diagnosed him as having autism...*”

This parent made another crucial observation, which was something where she felt that her “*child lost his speech and was diagnosed as having autism*”, which she “*associated with the DTP vaccine*”. From literature, according to the Centre for Disease Control and Prevention (2018) and the National Health Institute (2018), such concerns and speculations arose by worried parents like Mrs Maharaj (P) from School C, however as much as vaccines have perhaps received more scrutiny than any other speculated cause of ASD and its associated characteristics, the great majority of scientists, physicians, and public health researchers have concluded that there is no association between vaccines and autism. Autism Speaks (2018) attributes the symptoms as mutations in the genes that can affect how the brain develops and functions, starting well before birth and even though the outward symptoms may not be apparent immediately after birth, the underlying brain differences are accumulated. However, if there is a severe disruption then the compensatory processes are no longer enough, and symptoms emerge. Thus, this may explain many cases of autistic regression, in which a young child seems to be developing normally, only to lose abilities, or regress into autism. Perhaps the initial disruption in brain development continued worsening, or perhaps the compensatory processes could not keep up (National Institute of Health, 2018). According to the National Institute of Neurological Disorders and Stroke (20), researchers have discovered that genetic mutation in children diagnosed with autism experience language skills regression early in life thus causing speech delays or no speech and learning difficulties. Whilst those were perspectives from a parent, another

parent, Miss Cele from school F stated, “...*he’s not talking and walking...he sometimes screams.... the ancestors are worrying him...*” She further elaborated “... *I prayed for him but didn’t help...*” “...*one day he got sick, so I took him to the doctor...told the doctor he doesn’t talk, and he doesn’t look when I talk to him...doctor said he is autistic...*”

This parent initially attributed her son being non-verbal to cultural problems that affect learners spiritually. She also mentioned that despite her performing all the rituals, the child still did not gain his speech. From literature, religious explanations rationalised that ASD was a result of witchcraft and demonic possession (Matteson, 2015). However, she was forced to take him to a doctor when he fell ill, and he was diagnosed as autistic.

Another parent Mrs Jayram from School D stated, “...*he says a few words, but I use pictures and some sign language to get through to him...he can recognise some pictures...especially pictures of foodstuff...*”

Mrs Khan (P) from School D explained “...*she doesn’t like to read but will read or write when she wants to...*” She further elaborated, “...*she doesn’t like to talk but will repeat some words when we speak at home...*”

From this data, it is quite evident that learners with ASD experience an array of communication challenges although parents use different forms of communication, such as pictures, whilst Mrs Khan (P) from School D mentioned “*she doesn’t like to read but will read and write when she wants to...*” Rippel (2018), states that autistic kids often have difficulty learning in traditional ways because their brains just do not process information in the same way that other children do. Mrs Khan (P) also mentioned that “...*she will repeat some words when we speak at home...*” Many children with ASD use echolalia, which means they repeat others’ words or sentences, especially of familiar people, such as parents and/or teachers, or they might repeat sentences from their favorite video, which is a steppingstone to language development (Stiegler, 2015). Although parents experienced similar educational vulnerabilities with their Children with ASD as educators experienced,

their experiences and approaches were different from educators experiences of learners diagnosed with autism and as a researcher, my observations of educational vulnerabilities of learners diagnosed with autism at school and home visits also concurred with that of the educators and parents, which was, that of “poor eye contact and communication that was exacerbated by speech and cognitive functioning.” From the literature (National Institution for Deafness & other Communication Disorders (NIDCD), 2018), the ability of children with ASD to communicate and use language depends on their intellectual and social development. Some children with ASD may not be able to communicate using speech or language, and some may have very limited speaking skills (Stiegler, 2015).

Hence, the data presented in this study, that of educational vulnerabilities experienced by learners diagnosed with autism were somewhat constant irrespective of being at school or home. However, these educational vulnerabilities were attributed to a series of causes, from parents’ perspectives and were approached differently from educators, however, it was concluded that they were all intrinsic to the autistic learner and the manifestations thereof are related to their cognitive development and processing of information so the kind of stimulation that learners with ASD get at any given environment will ameliorate their educational abilities.

Finally, the data presented the culmination of different forms of vulnerabilities, such as personal, social, and educational vulnerabilities which were all found to be intrinsic in learners diagnosed with autism. These three types of vulnerabilities are common in typically developing learners and in some adults, however, it is somewhat different in learners with ASD, as it is more pronounced and noticeable. The findings thereof suggested that learners with an ASD can be particularly vulnerable to bullying and social exclusion and may find it difficult to maintain friendships. Contributing factors include difficulties with verbal and non-verbal communication, narrow interests and rigid behaviors, sensory sensitivities, and reduced social skills compared to their peers.

6.5 REALISATION OF THESE VULNERABILITIES?

The realisation of the vulnerabilities was gleaned through the data generation process. This process entailed semi-structured interviews and observations with 3 educators at 6 special needs schools and 3 parents who have learners with ASD from those respective schools, also by the researcher's personal observations at school and home visits. The learners were 5 to 18 years old. The process was undertaken, by gaining the educators' perspectives of learners diagnosed with autism at school, parents' perspectives of learners diagnosed with autism at home, and the researcher's observations made at school visits and home visits. Since ASD is a developmental disorder that can be diagnosed at any age (National Health Institute, 2018) and each ASD learner is unique with their own set of challenges and weaknesses, abilities, and needs (Saggers, 2016), the study engaged people that were directly involved with learners diagnosed with autism, such as educators and parents.

Through the data generation process, it was ascertained that educators and parents experienced similar kinds of vulnerabilities with learners diagnosed with autism which conformed to the observations made by the researcher. The researcher analysed the data, which presented the different forms of vulnerabilities that learners with ASD experience which were sub-categorised as personal, social, and educational vulnerabilities. Although these phenomenological vulnerabilities experienced by educators and parents were similar, they were experienced in different contexts and the approach thereof was different by educators and parents. For example, learners with ASD experience transitioning challenges which are a personal vulnerability, Mr Khan (E) from School E mentioned, "*... it's quite a struggle to get these learners with ASD settled in class. They have high anxiety levels, they tend to scream and stim, but eventually, we manage to settle them down over time...*" whilst the similar vulnerability is approached differently by a parent Mrs Maharaj (P) from School C who stated, "*...we took him to an entertainment area, he screamed and screamed until he got his pacifier...*"

Hence, the data generation process allowed for the interpretation of the vulnerabilities by educators and parents which enabled the researcher to get a more precise understanding of the vulnerabilities that learners diagnosed with autism experience. According to Lebiéd (2018), the interpretation of the data refers to the implementation of processes through which data is reviewed to arrive at an informed conclusion and assigns a meaning to the information analysed and determines its signification and implications. Thus, this interpretation of the data allowed the researcher to realise the vulnerabilities experienced by learners diagnosed with autism which were all intrinsic to autistic learners.

6.6 GENDER AND VULNERABILITIES

According to the World Health Organisation (2018) gender refers to the biological sex, such as boy or girl, of an individual besides their roles, behaviors, activities, attributes, and opportunities that any society considers appropriate for females and males, and women and men. As can be seen in Table 5.2, the prevailing gender of the sample were males. In this study I interviewed eighteen parents through the process of purposively selected sampling and gauged that fifteen parents indicated that they had an ASD son whilst only three parents had ASD daughters (Table 5.2). Hence, this information indicates that boys are four times more likely to be autistic than girls, giving me a ratio of 4:1. Upon further investigation, the school principals confirmed the finding and added that the current male bias is even larger as some learners had traits of autism but have been misdiagnosed, giving a ratio of 7:1. The gender disparity in my study was considerably higher. The Centers for Disease Control and Prevention (2017) states that boys are "four times more likely" to have a diagnosis than girls and doctors may be likely to underdiagnose autism in girls because they may not fit the traditional view of an autistic person, or because they hide their symptoms.

The data presented more boys than girls whereby boys had stronger traits of autism, for example, boys will rock and stim much more than girls do. Miss Perumal (P) of School D mentioned, “...*I have a son and daughter with autism, they are both ADHD, but I noticed*

my son is everywhere... he screams, jumps and rocks very often but my daughter is quieter, she will rock for a short while and stop...”

Mr Naicker (P) of School A mentioned, “...*he used to be so fidgety...jump around...he will scream and get his way...he just won't listen to anyone...everyone just thought he was naughty...*”

Mrs Khan (P) of School D stated “... *she sits quietly...just now and again she tends to rock and laugh aloud... but when we tell her to keep quiet then she will stop and smile...*”

Miss Perumal of School D made a distinct comparison and observation with both her son and daughter, that the boy is more prone to stimming and screaming as compared to her daughter who would stim but for shorter periods. The National Autistic Society (2019) states that the prevalence in boys is greater than girls, however, the mechanisms underlying male vulnerability or female protection are unknown and remain understudied (Ferri, Brodtkin, Abel, 2018). However, one reason for the discrepancy in diagnosis may be that ASD traits "look different" in girls than in boys (Baio, et al., 2018), and girls also tend to have fewer and less unusual repetitive stereotyped behaviors than boys (Tierney, et al., 2016). A diagnostic bias toward characteristic ASD traits as they present in boys makes it easy to miss ASD traits as they present in girls (Dean, Harwood, Kasari, 2017).

Through interaction with parents, I gauged that most parents realised that their son with ASD did not have speech at two years. Verbalis (2019) stated that girls develop early, which includes achieving basic milestones on time, such as early social isolation, early unusual play, behavioral rigidity, and obsession with animals. Miss Chetty (P) from School D stated that “*her daughter with ASD had developed all her milestones early*”.

According to Szalavitz (2016), research suggests that current diagnostic methods overlook girls, implying that even more children may be on the autism spectrum. Behavioral and preliminary neuroimaging findings suggest autism manifests differently in girls (Brasic,

2020). Girls with autism may be harder to diagnose for several reasons, including criteria developed specifically around males and overlapping diagnoses such as obsessive-compulsive disorder or anorexia (Szalavitz, 2016). Hence, it was also established from the data that some learners with ASD, especially female learners with ASD get diagnosed much later, and very often it is the educator that observes the child's peculiar behavior and informs the parent.

Miss Perumal (P) from School D stated, “...*she went normally to school...then one day her teacher called me and told me that she suspects something is amiss with her child and that I should take her to the doctor to have her assessed...when I took her to her pediatrician...she was diagnosed as having Autism Spectrum Disorder...*”

Consequently, educators use a screening strategy from the Department of Basic Education (2001), namely SIAS (Screening, Identification Assessment, and Support) to identify learners that experience barriers to learning, whereby an intensive report is compiled. It is then sent to the pediatrician for the learner to be accurately diagnosed for proper intervention and treatment. The data revealed that some girls get diagnosed much later particularly when they are in the foundation phase at school. Some clinical observations that were made by researchers and doctors (Bargiela, Steward, William, 2016) and the findings include, females, have fewer repetitive and stereotyped behaviors, social communication difficulties which can be more subtle in girls than boys and that this partly reflects their greater social motivation and compensation.

Furthermore, girls present with more internalising and fewer externalising behaviors compared to males and girl's internalising problems sometimes mask their social communication difficulties. Hence, this study revealed the prevalence of ASD in boys than girls.

6.7 RACE AND VULNERABILITIES

ASD affects people of all races and ethnicities (Rentz, 2018). According to Bryce (2020), race is understood by most people as a mixture of physical, behavioral, and cultural attributes and ethnicity recognises differences between people mostly based on language and shared culture. Researchers believe that ASD diagnosis are made based on a pattern of behavioral symptoms, yet a growing body of research indicates that when the individual receives a diagnosis it is influenced by myriad demographic factors including race, ethnicity, socioeconomic status (SES), and parental education level (Nowell et al., 2015). Parents who were of black origin with minimal education and in the lower socio-economic bracket expressed their concerns around autism and that they did not have much knowledge on autism.

Mrs Zweli (P) of School F stated, “...*I don't know anything about autism...the doctors and nurses told me he's autistic...so I just take him for his treatment to the doctor and the doctor told me to put him in a Special needs school...*” She further elaborated, “...*I just accepted it and I help him...*”

Miss Cele (P) of School F mentioned, “...*he wasn't walking and talking when he was 3 years old...took him to the doctor...doctor said he is epileptic...later he told me that he is autistic.... I don't understand what autism is...*”

The data highlighted that racial factors are influenced by the socioeconomic issues that impact the early diagnosis of learners with ASD. Although there is a growing number of learners with ASD in all racial and ethnic groups (Table 5.2), it is however influenced by socio-economic issues. Nevison and Zahorodny (2019), Individuals with Disabilities Education Act (IDEA), and the Autism and Developmental Disabilities Monitoring (ADDM) Network, stated that white ASD prevalence has been historically higher than other racial groups but plateaued for IDEA birth cohorts from 2004 to 2007 before resuming its increase. Black and Hispanic IDEA prevalence increased continuously and

were in line with whites by the birth year 2008 and 2013, respectively, with black prevalence subsequently exceeding white prevalence in many states. The data revealed that the racial factors and understanding of ASD are influenced by the socioeconomic issues and the findings thereof impact on the diagnosis, treatment, and interventions that could have started earlier in learners with autism.

6.8 CONCLUSION

This chapter examined the different types of vulnerabilities experienced by learners diagnosed with autism which was gauged by the interaction of the data. The three broad vulnerabilities that learners diagnosed with autism experience includes personal vulnerabilities, social vulnerabilities, educational vulnerabilities, and within those vulnerabilities, gender and race vulnerabilities indicated the prevalence of autism.

After close examination of the types of vulnerabilities that learners with autism present and the findings thereof, it is noted that these vulnerabilities are experienced differently in the different situations by learners with ASD. In schools it is the interaction with learners and educators, however, in the home situation, it is the changes in the environment. The data alluded to everyone, including typically developing learners, experience these three broad vulnerabilities, however with autistic learners it is more pronounced as learners with ASD are inept and assume everything being fraught and complicated. Hence, according to Stavropolous (2018), the social theory states that they lack the theory of understanding someone else's mind, emotions, and feelings, thus they experience difficulty interacting with people and maintaining friendships. Furthermore, according to the humanistic theory (Rudy, 2019), learners with ASD lack "Theory of mind," this describes the human ability to understand that it is impossible for one person to know what is going on in another person's mind, hence this becomes elusive to learners with ASD.

The other finding is the changes to their environment which is largely dependent on the child's social and cognitive development and specific behavior. From this perspective,

according to Bronfenbrenner's (2018) ecological theory, human development can be described in the form of interconnected, nested ecological levels, which can be applied to the environmental circumstance of autistic children. He further stated that a collection of interactive microsystems composes a mesosystem and ecosystems have an indirect or secondary impact on the child through their direct influence on the persons who interrelate with the child, thus the intervention is made at an individual level, attempting to change the child and to facilitate his/her adjustment to the external environment. The next chapter is still part of the data presentation however, it will illuminate the challenges that educators experience in teaching learners with ASD, thus it will relate to the second research question to this study.

CHAPTER SEVEN - DATA PRESENTATION – THEME 2 CHALLENGES EXPERIENCED BY EDUCATORS AND PARENTS IN TEACHING AND LEARNING OF LEARNERS DIAGNOSED WITH AUTISM

“If a child can’t learn the way we teach, maybe we should teach the way they learn”

Ignacio Estrada (2019)

7.1 INTRODUCTION

This chapter presents the data and analysis within theme 2 and will contribute to a response to two of my research questions. It will thus, illuminate the challenges that educators and parents experience with learners diagnosed with autism. Apart from the vulnerabilities experienced by learners with autism, parents and educators also experience challenges that are of a different nature but has a direct bearing on learners diagnosed with autism. Parents being the primary caregivers and educators for their children play an important role in a child’s learning and development (Price, 2017). Parents may not be formally qualified, however, the practical mediation of learning that the parent teaches a child from day one of a child’s life is the most influential teaching that a child learns from until they start going to school (Henry, 2018). Once the child starts formal education, then the educator imparts knowledge to the child by a process of scaffolding. The teacher will support the learners to enhance learning and to master the tasks and skills, ultimately aiding the learners to independent learning (Firestone, 2016, p. 6). Thus, in this chapter, I will highlight the challenges through the lens of educators that teach learners diagnosed with autism and parents who have children diagnosed with autism. I will first delineate the parents' challenges as they are the primary educators and caregivers for their Children with ASD. Thereafter, educators’ challenges will be discussed.

7.2 THEME 2 – CHALLENGES EXPERIENCED

7.2.1 Parents challenges

Parents' challenges can be described as any difficulties and concerns that a parent experiences in raising their child (Lehman, 2020). According to Hartley and Schultz (2015), parents of autistic children experience unique challenges thus they require a high level of knowledge, understanding, and support. They further stated that these parents can glean such support, knowledge, and understanding through family, friends, and ones' spouse besides the interaction of a bevy of professionals, such as pediatricians, neurologists, speech therapists, and occupational therapists. In this study, I have gauged that parents' challenges stem from two broad categories such as:

- Parent's knowledge of Autism Spectrum Disorder
- Challenges of being a single parent of learners diagnosed with autism

To better conceptualise the challenges experienced by parents in the teaching and learning of learners diagnosed with autism, each of these challenges will be elucidated through the lens of the parents who have children diagnosed with autism spectrum disorder.

7.2.1.1 Parent's knowledge of Autism Spectrum Disorder

Parents were selected through a process of purposive sampling (Table 5.2). The data revealed that parents' knowledge tantamount to their understanding and perspectives of ASD. These perspectives were perceived through semi-structured interviews and observations made at their homes. Parents had very limited knowledge and understanding of autism. Anwar, et al. (2018) stated that parents are the primary caregivers in most situations, their ability to recognise the signs and symptoms of autism and respond appropriately is of paramount importance in aiming to provide the best healthcare to autistic individuals. In this study, I ascertained that parents gained knowledge and awareness of autism experientially with their ASD child.

Miss Jones (P) from School A maintained, “...he didn’t have speech at 4 years old...he also won’t look at me when I used to talk to him...he didn’t like certain clothes...he wasn’t like normal children...” She further elaborated, “...his eating habits were different...ate unusual things, like sand, lotion. We couldn’t take him to malls and supermarkets...he would scream and cry. I just couldn’t understand why he behaves like this, so I took him to the doctor, who diagnosed him as autistic. I really thought he would get better as he grows up... I learned a lot about autism through my experience and reading after he was diagnosed.”

Mrs Dlamini (P) from School B explained, “...he is different from normal children...he still didn’t have speech and wears nappies at this age. He is 7 years old and I’m training him to go the toilet...” She further mentioned, “...I didn’t have any knowledge about autism...I just noticed he was different from other children. He would always want to be alone and would sometimes cry for no reason, so I took him to the doctor who diagnosed him as autistic. I then started learning about autism through my experiences with my child...”

Miss Cele (P) from School F mentioned, “...he was 3 years old when I felt something was wrong with him...he wasn’t talking and walking...he would scream and cry...so I took him to the doctor who told me that he has autism...I didn’t know about autism...I just know he is different from normal children...”

Parents realised that these abnormalities were very concerning when they noticed their Children with ASD were “*different and had unusual*” traits compared to typically developing children. They further elaborated that they “*didn’t have any knowledge of autism*” until they noticed delayed milestones or peculiar behavior in their children, besides noticing that their “*children were different from other children*”. This led them to see a doctor who later diagnosed their children as having Autism Spectrum Disorder. Upon the diagnosis being made, parents were still unclear about autism, thus they acquired their knowledge on autism through their own *experiences* and by independent *reading*. Whilst

that was the view of some parents, other parents sometimes see themselves as a cause for their children's autism,

Mrs Paul (P) from School E mentioned, “...*I blame myself...if only I spent quality time with him.... I would have realised and noticed that my child is different from other children...*”

Mrs Paul (P) from School E, blamed herself for not interacting early in her ASD child's life, and often, like this parent, other parents get distressed and overwhelmed and *blame* themselves for not spending enough time with their Children with ASD to gauge the problems that manifest later in their children's lives so that proper treatment and interventions for their Children with ASD could have mitigated some of their vulnerabilities (Matteson, 2015). Therefore, parents' knowledge and awareness of autism can assist doctors in the prognosis of ASD and interventions thereof (Wetherston, 2015). Hence, there is a high chance of misdiagnosis or late diagnosis if there is a lack of awareness about the signs of this disorder, especially among parents since they will be the first to observe any unusual behavior compared to other children or siblings of the same age group.

Miss Jones (P) from School A mentioned, “...*his milestones were all delayed...he didn't have speech at 4 years old so I thought he is just late and those milestones will develop... eventually I felt something was wrong... he won't look at me when I talk to him so I thought he had a hearing problem...then I took him to my doctor who sent me to a specialist...the specialist did lots of tests on him, such as hearing tests, blood tests, etc....then he told me that my child is autistic...*”

This parent was hopeful of her child's milestones developing later. She was unaware of the signs and symptoms of autism although he displayed some ASD traits. She only got to know her child has autism at four and a half years old after the doctor went through intensive medical analysis and diagnosed the child as autistic. Early and accurate diagnosis plays a critical role in outcomes and improvement of behavior in Children with ASD (American Psychiatric Association, 2019).

In addition, Miss Cele (P) from School F stated, “*once the doctor diagnosed her child as autistic, she just takes him to the doctor but still doesn’t know about autism*”, thus parents find it challenging to navigate the healthcare system and determine which interventions are most effective and appropriate for their child (Elder, et al., 2017). Estes (2019) maintains that it is increasingly recognised that although children with ASD are the primary targets of early ASD intervention, ASD intervention also impacts parents, especially when they do not have adequate knowledge on ASD as the data revealed. The data concluded that parents sought knowledge on autism experientially, although the experiences differed from parent to parent. Parents also had to consult with medical experts for a diagnosis and some parents were in denial and relied on time for corrective possibilities. The findings thereof are that parents should not rely on extended milestone periods for corrective interventions but rather they should consult appropriate doctors for early identification and diagnosis based on the child’s behavior or on their child not meeting some normal expectations as typically developing children (Mahoney & Wiggers, 2016).

7.2.1.2 Challenges of being a single parent of autistic learners

According to Pilossoph (2017), single-parent families are families that are headed by a parent who is widowed or divorced and not remarried, or by a parent who has never married. The views expressed by the participants (Table 5.2) resonated mostly from single parents, specifically maternal parents. Whilst the research design did not distinguish between single parents and both parents, however in linking the data to who the parents were and the concerns raised about who takes the primary responsibilities for their autistic children. This section deals with the notion of parenting. Hence, the data presented the majority of the parents as single parents, who mentioned that it is “*their duty*” to take the necessary responsibilities for their ASD child. They “*collect a child support grant*” which “*is not enough to take care*” of their ASD child’s demands. Some of them were frustrated, whilst some were exhausted, and others felt that it was “*their duty*” to take responsibility for their ASD child. When asked where the child’s father is, some mentioned the following:

Miss Cele from School F explained, “... *his father just left home... I don't know why...so I have to do everything for my child. I get a child support grant for him but that is not enough for me to take care of his needs. He is very selective with his food and it is very costly for me...*”

Miss Perumal from School D stated, “...*he comes late at night and leaves very early in the morning...he says he needs to work. When I ask him to help me, he says he is very tired, so I am left to do everything for my children. It is very exhausting, but I feel it is my duty, so I have to take care of my children...*”

Miss Jones (P) from School A stated, “.... *I am divorced... It is very difficult to take care of my child all by myself, but I try my best. He doesn't come to visit neither does he send any money for the child...*”

The data indicated that these maternal parents of autistic children find it difficult to cope as single parents or as a single parent in the absence of any meaningful contributions from their spouses. Some of them experienced financial challenges as the child support grant that they receive is insufficient to take care of their Children with ASD's needs as Children with ASD have “*food selectivity*” which can be “*very costly*” (Chistol, et al., 2018). Albeit the financial challenges, parents also experienced a lack of support from spouses as they had to endure the responsibilities of taking care of their Children with ASD by themselves as there were instances of abdication of paternal duty as Mrs Perumal from School D pointed out, “*when I ask him to help me, he says he is very tired, so I am left to do everything for my children.*”

As much as there was an abdication of paternal duty in some instances, the data also presented a father's perspective of his ASD child.

Mr Naicker (P) from School A mentioned, “... *I was scared and worried when the doctor told me my son is autistic because I felt that he has a problem that no one can fix, also he*

used to get very angry, scream and cry...” He further elaborated, “...it became my worst nightmare and the challenge started in my journey...my wife and I couldn’t see eye to eye...we used to have lots of arguments and disagreements over my son because he used to cry a lot and break things. She expected me to help him, but I didn’t know how to control him. I must say, she was able to handle him...unlike me who could not really understand him...”

Mr Naicker was “*worried and scared*” after his son was diagnosed with autism spectrum disorder, thus this became very *challenging* for him to understand, accept, and handle. He felt that his son had a “*problem that no one will be able to fix*”. This perhaps created lots of tension and a ‘*blame game*’ at home. Furthermore, his son used to “*cry*” incessantly and “*break things*” and as a father, he felt helpless. The lack of understanding of autism created “*lots of arguments and disagreements*” between these parents. Hence, this father having a child diagnosed with autism felt overwhelmed and “*scared*” at having to come to terms with their child’s ASD, as well as the realities of parenting a child with ASD. According to Martins, Fouche & Walker (2019), sometimes fathers of Children with ASD feel anxious, overawed, confused, and disappointed as their expectations were somewhat contrary. As much as parents feel *worried and scared* having an ASD child and in some cases two Children with ASD, like Miss Perumal (P) from School D, they still persevere, especially mothers of Children with ASD, who feel it is “*their duty*” to take care of their ASD child. The findings thereof indicates that it is the acceptance, understanding, and support from parents towards their Children with ASD that can assist in their early interventions.

7.2.2 Educators’ challenges

Challenges experienced by educators can be described as any barrier or obstacle whereby it becomes difficult for the educator to achieve his/her outcomes and goals (Dussault, 2018). The challenges in this study stem from a host of areas that are critical and are not only counterproductive but also it has a negative effect on the teaching and learning of

learners diagnosed with autism. The most common challenges that educators face in the teaching and learning of learners diagnosed with autism are:

- Educators' knowledge and training on Autism Spectrum Disorder
- Resources
- Overcrowded classrooms

To better understand how these challenges impact the teaching and learning of learners diagnosed with autism, each challenge will be illuminated through the lens of the educators' and the engagement of the data.

7.2.2.1 Educator's knowledge and training on Autism Spectrum Disorder

Educators were selected through a process of purposive sampling (Table 5.1). Most of them were well qualified and had over 10 years of experience with special needs or psychology as their majoring module. The interviews yielded data that addressed a broad range of perspectives from educators through semi-structured interviews and observations that were made in the class by the researcher. Despite the differences in background, age, and experience, the participants spoke with one voice in addressing the issues they face in their daily experiences with learners with ASD. Learners with autism often present unique challenges to schools, and educators can often find it difficult to meet their needs effectively, especially their sensory issues and behavior. Therefore, educators need a better understanding and specialized training to implement appropriate strategies (Saggers, 2016). The following excerpts illuminated some of the challenges experienced by educators.

Mrs Ngwane (E) from School F explained, "...it was hard to understand learners with ASD. Some of them cry for no reason, some of them don't like being near other children and I also noticed they don't like noise. I realised that they are so unique. I did not have any knowledge about autism but when I had autistic learners placed in my class then I started reading about autism and attending workshops..."

Mrs Joseph (E) from School D stated, “...*I didn't know anything about autism when I was placed in the autism unit. I realised I couldn't do the same work with all of them, each one of them is so unique so their work had to be done according to their individual abilities. I also could not do many play activities, they did not like noise, each one wanted attention. So sometimes what I planned for my class was not always possible. It was rather challenging but when I spoke to some of my colleagues, they mentioned that they experienced similar until they started attending workshops and reading about autism which I started doing as well but each learner is so diverse so I'm still learning...*”

Mrs Moses (E) from School D mentioned, “... *I was placed in a class where I had autistic learners, but I didn't know anything about autism...no experience and training. We also don't have a curriculum for ASD...not much support from School Management teams and Department officials...educators don't have experience ...although some educators have double degrees their courses did not have much information about autism and even if there are any workshops from the department...it's very narrowed down...so you have to make meaning and sense all by yourself. It becomes trial and error when we are teaching these learners with ASD...*”

Educators made very crucial statements especially not having experience in teaching learners with ASD and their limited knowledge which is gained through their experience by teaching learners with ASD. They further explained that although autism is a fast-growing disorder globally (World Health Organization, 2018), there are no *course* with an intensive section or module on autism at universities or higher educational institutions. Educators experienced various challenges, such as “*each ASD learner is so unique and their work had to be according to their individual abilities*”, so group activities became very challenging, as learners with ASD experience difficulty interacting with other learners (Saggers, 2016). Furthermore, learners with ASD had difficulty tolerating the “*noise*” in the class. Educators' knowledge interest in autism began when they were directly exposed to learners in their class, thus, they had to “*read and attend workshops*” on autism to teach

learners diagnosed with autism. learners with ASD are unique as Mrs Ngwane (E) from School F stated, hence the use of flexible and individually tailored approaches to teaching and learning is crucial in this regard as they require different approaches and needs (Jackson, 2015). Hence, the data presented the challenges that educators experience to meet learners' needs and demands, such as, the lack of “*knowledge*” and “*training*” with learners with ASD, besides “*not getting much support and guidance from Senior Management Teams (SMT)*” at school and department *per se*. The data also presented the kinds of challenges that educators experienced inhibited the effective production of work with the learners diagnosed with autism as Mrs Moses (E) from School D mentioned, “*...what I planned for my class was not always possible...*” Hence, educators need to have a better understanding of autism for them to plan and package work according to learners with ASD’ individual needs and abilities (Saggers, 2016).

In order for educators to have the necessary understanding of autism and plan and package work according to learners’ individual needs and abilities, they need to have the relevant knowledge, skills, and training to guide them to ensure quality education for all learners with autism (Department of Basic Education (DBE), 2014). Although there are such guidelines and policies that advocates providing expert “*knowledge*” and “*training*” in the planning and delivery of the curriculum programmes that are offered in special schools, it is in direct contradiction to the current situation at schools as expressed by Mrs Moses (E) from School D “*not much support from School Management Teams and Department*”. However, the necessary support and guidance from the multidisciplinary teams that ought to have been cascaded to educators could not be realised due to the lack of expert staff, which was hampered by the current moratorium on the employment of support staff at the Department of Education (KZN HRM Circular No. 41 of 2012).

This educator made a very critical statement in that, “*it’s difficult to work with learners with ASD without the speech and occupational therapists*” as they play a pivotal role in the learning and development of learners with ASD (SOTadmin, 2018). The moratorium placed on the employment of support staff has a domino effect on the teaching and learning

of learners with ASD, and according to Jacobson (2016) educators can feel quite fragmented as they cannot attain their holistic goals and outcomes for their learners diagnosed with autism.

7.2.2.2 Resources for teaching learners diagnosed with autism

Resources, according to Gunjugenius (2018) is anything available in the environment that fulfills human's needs which should be easily accessible, economically feasible, socially, and culturally acceptable. He further stated that resources are all the things on the earth surface which are necessary for our existence, even human beings are considered as a resource because human beings are an asset and it is only with the help of human skill, that the other resources can be developed. Learning requires resources, hence learning resources are primarily any tool that facilitates the process of learning for both the educators and the learners (Savery, 2015). Without proper resources, schools will be in decadence (Mupa and Chinooneka, 2015, p. 125). From this backdrop, the study presented the lack of three kinds of resources that are barriers to the teaching and learning process of learners with ASD. These are extrinsic to learners with ASD at special needs schools but are crucial to the teaching and learning of learners diagnosed with autism. Resource challenges include Human resources, Material resources and Financial resources.

(a) Human resources challenges

Human resources in this study refer to the facilitators, educators, and support staff. Support staff includes therapists (speech, occupational), class assistants, drivers, and cleaners. The study presented that children have individual needs and trajectories that require differentiated instruction and support to enable optimal growth in competence, confidence, and motivation. However, the lack of staffing impacts learning and hinders quality teaching which is the most powerful tool for learning (Mupa and Chinooneka, 2015). In this study, educators need to give learners emotional, organisational, and instructional support (Graziano, 2019) however, for educators to achieve these three critical domains in teaching,

they need to engage other personnel, such as class assistants and therapists. This personnel falls in the category of support staff.

Mr Krishna (E) from School A mentioned, “...we are grossly understaffed thus we are in dire need of staffing at our school. We have a shortage of class assistants. The majority of the class assistants at my school are employed by the School Governing Body (SGB), however, this is still not sufficient. We sometimes have to share class assistants between two classes. This is not practical as these learners require high levels of support.” He further elaborated “... we don’t have any therapists at our school, it is so difficult to work with these learners with ASD without the speech and occupational therapists...”

Mrs Moses (E) from School D explained “...we don’t have sufficient personnel to achieve our outcomes with our ASD and high care learners...their demands are high...”

Mr Ram (E) from School A maintained, “The insufficient personnel at my school are impacting on classroom delivery...” He further elaborated “...school does not have any therapists and therapists play a crucial role in teaching and learning of learners with ASD...”

Educators expressed great concern over the lack of human resources which is impacting negatively on the “teaching and learning of learners with ASD”. Some schools are posed with this huge challenge of lack of human resources as the department of education has placed a moratorium on all support staff posts, including teacher assistants, therapists, nurses, drivers, and housemothers (KZN HRM Circular No. 41 of 2012). Support staff posts have not been filled when positions become vacant due to attrition, including retirement, resignation, or death of the staff member. Some schools “are grossly understaffed”, and it is impractical to “share class assistants as learners require high levels of support” considering they have low cognitive abilities, so “their demands are high”. Despite some “school governing bodies (SGB)” employing support staff, it is “insufficient”, thus this “impacts classroom delivery”.

Mr Krishna (E) from school A, stated that *“it is so difficult to work without the speech and occupational therapists”*. Educators feel so fragmented as the intervention of therapists, that is, speech and occupational plays a crucial role in educating learners with ASD as Mr Ram (E) from school A stated. ASD at special schools usually range on a low trajectory and have major problems with both speech and nonverbal communication, language and development, and social communication (Department of Basic Education, 2001a). For these reasons, speech therapy is a central part of treatment for autism and can address a wide range of communication problems for learners with ASD (National Institute on Deafness and other Communication Disorders, 2018). Also, occupational therapists make provision for individual therapy based on their needs and abilities in several areas, including physical, emotional, social, cognitive, and sensory. Thus, they work with each child, holistically, to improve their ability to process sensory information and help them to be calm and stay focused (SOTadmin, 2018). Educators experience a variety of challenges due to the lack of support staff at their schools. The following excerpts encapsulate some challenges.

Mr Ram (E) from School A maintained, *“...some of our learners with ASD take medication ...we have no option but to administer the medication to the learner...”*

Mr Govind (E) from School B explained, *“... we don't have nurses at my school to administer learners' medication...”*

Miss Geeta (E) from School A stated, *“...we don't know if we are administering the correct dose of medication as parents don't give us updates on their children's medication...furthermore, although we give them that medication to keep them calm, they still display behavioral issues... feel it's so unsafe and can have legal implications on us as educators...”*

The data presented grave concern from educators, as educators *“have no option but to administer medication to their learners with ASD as there are no nurses at the school”* due

to the moratorium. Shriver (2019) explains that currently medication cannot cure ASD or all its symptoms, but some medications can help treat certain symptoms associated with ASD, especially certain behaviors. However, learners sometimes continue to “*display behavioral issues*”. Despite the challenges, educators have no option but to administer the medication even though there may be “*legal implications.*” Miss Geeta (E) from School A insinuated that “*this is unsafe, illegal, and unfair to both the employees and learners*”. It is a gross infringement of their basic human right, their right to medical care, and quality education (Dhanook, 2017). The data disclosed that educators feel that they have “*no option but to administer the medication to the learners*”, however from my observation, some educators act as “*in loco parentis*”, which is a Latin term for “*in the place of a parent*’ which refers to the legal responsibility of a person or organisation to take on some of the functions and responsibilities of a parent. Thus educators take the necessary care and responsibility and act out of humanity (HRM Circular No. 20 of 2009). The findings thereof alluded to the lack of support staff which impedes the holistic development of learners diagnosed with autism, hence, educators feel “*fragmented*” which ultimately affects “*classroom delivery*”.

(b) Material resources challenges

Material resources according to Graziano (2019), include any items the school currently owns, such as school furniture, equipment, technology, curriculum materials, manipulatives, textbooks, and any other materials within the school. Learners with autism have unique needs with learning, social skills, and communication, as each learner requires different kinds of resources for effective teaching and learning (Centers for Disease Control and Prevention, 2018). Educators in this study struggle and improvise resources for effective teaching and learning for learners diagnosed with autism.

Mr Krishna (E) from School A explained, “*...we don't have proper resources to teach the learners with ASD, especially the internet where the learners can access some programmes through our guidance...*”

Mrs Moses (E) from School D maintained, “...we have to make our resources...each ASD learner's programmes are individualised so each programme is different from the other. We practically get our own pictures, cut and laminate, or sometimes go to the library and photocopy relevant pictures for our themes so that we can accomplish our outcomes... it's so hard when you don't have the right resources...”

Miss Geeta (E) from School A stated, “...we don't have sufficient resources for our learners with ASD, but we have to make do with what we have, especially the Go Talk, puzzles, and adapted keyboards. We also don't have a sensory room which can help our learners to calm down...”

Mr Khan (E) from School E mentioned, “...sometimes we have to draw an image on the board to make a point to learners but very often it doesn't look exactly like what you wanted to concretise...”

Educators in this study expressed extreme disappointment in that “they don't have enough resources” and in some cases, “relevant resources to teach learners with ASD”, thus they “have to make their own resources”. Although there are insufficient material resources to teach learners with ASD, some educators still persevere to maximise their teaching potential, whilst some educators know what *outcomes* they want to *accomplish* but their lack of material resources, such as the “internet, Go Talk, Adapted keyboards, sensory rooms,” etc. According to Savery (2015), inadequate material resources can hamper the teaching and learning for learners diagnosed with autism. For example, Mr Khan (E) from School E mentioned that “they sometimes have to draw an image that doesn't look exactly” like what they intended and some learners with ASD learn more effectively with visual aids as they are better able to understand the material presented visually as this allows learners to concretely see what is going on throughout the day. Also, they know what to prepare for and what activity they will be doing next as some autistic children have trouble transitioning from one activity to the next, so this visual schedule can help to reduce stress

(Synapse Reconnecting Lives, 2016). The findings thereof were that educators experienced a myriad of challenges with inadequate material resources thus having hampered the maximum participation from learners and reaching their desired outcomes and goals. It is therefore important to use proper material resources in the teaching and learning process to build a solid foundation for lifelong learning (Savery, 2015).

(c) Financial resources challenges

Financial resources include cash and lines of credit (Graziano, 2019). This study presents the lack of financial resources, such as lack of special needs schools and other facilities; insufficient classrooms, insufficient, underpaid, and/or insufficiently trained educators, lack of management and supervision, and lack of and/or poor-quality material resources and other learning materials, which are a result of insufficient funding which acts as a barrier to any child seeking an education. Learners diagnosed with autism have individual needs and demands (Jackson, 2015), thus programmes are individualised which requires specific resources (Saggers, 2016). Hence, those resources can only be made available if there are sufficient funds to purchase them for effective utilisation in the teaching and learning of learners with ASD (Mupa and Chinooneka, 2015), which educators' find most challenging,

Mrs Moses (E) from School D explained, “...*there are so many lovely resources on the internet, but the school cannot afford to buy it...it's so heartbreaking when you know you want to do so much for these learners with ASD, but you are so restricted...when we ask to purchase these resources, we are told there are no finances... yet I know there is a budget from the department for the learners with ASD...*”

Mr Krishna (E) from School A stated, “...*lack of finances hampers our programmes with learners with ASD in our class. We don't have sufficient finances to purchase equipment and charts. We also cannot afford the internet to access the resources we require for our lessons.*”

Educators in this study expressed dissatisfaction and this was evident in Mrs Moses (E) from School D response, *“it’s so heartbreaking when you know you want to do so much for these learners with ASD, but you are restricted,”* also knowing that there is a *“departmental budget allocated for ASD”* and high needs learners. This educator insinuated that the *“department budget that allocated”* to schools is not effectively utilised for learners with ASD. Educators are told that there are *“no finances to purchase resources”*, thus this *“hampers their class programmes.”* The data reveals that this is in direct contradiction to the departmental funding for high needs learners. According to SNES (Special Needs Education Service, 2019), special schools are allocated R200 000 from the KwaZulu-Natal Department of Education for learners requiring high levels of support, and ASD falls within this category. Educators expressed concern around this allocation as they assume that schools are utilising these funds more for the school deficits rather than for the actual needs of the learners with ASD where it is rightfully allocated.

Finally, the data concludes that the lack of human resources, material resources, and financial resources are the concern of most participants which exacerbated the challenges that they experienced in teaching learners diagnosed with autism. Some educators felt that they were not fully equipped to handle their learners with ASD, yet the school was admitting many learners with ASD. According to the National Development Plan (NDP), (2017), inadequate funding, lack of human resource capacity at all levels of the education system, low levels of school e-readiness, and the shortage of appropriate educator knowledge and skills to effectively apply e-Learning pedagogies in the classroom, are some of the challenges affecting the rollout of ICT (Information & Communication Technology) to support teaching and learning (Department of Basic Education, 2017). The findings thereof show that the Department of Basic Education (DBE) is fully aware of the challenges that are impacting the teaching and learning of learners with ASD, however, there is not much effort in rectifying such situations which are negatively impacting the teaching and learning of learners with ASD.

7.2.2.3 Overcrowded Classrooms

An overcrowded classroom is one in which the number of learners exceeds the optimum level such that it causes hindrance in the teaching-learning process and affects the educator-learner ratio (Dabo, 2015). According to Kerch (2016), the effects of overcrowded classrooms on educator-learners interactions found that over-crowdedness diminishes the quality and quantity of teaching and learning with serious implications for attainment of educational goals. With the number of learners enrolled in schools increasing, according to the National Center for Educational statistics, schools are forced to put more children in each classroom or use smaller spaces as classrooms, thus this overcrowding can have negative effects on learners and educators (May, 2016). The data in this study present learners with ASD placed in six special needs schools, three of the six schools had their learners with ASD integrated into other classes across the school, which is placing learners with ASD with other learners with different disabilities whilst the other three schools had learners with ASD placed in their ASD units.

Mrs Singh (E) from School B mentioned, “...it’s so hard to do my class programmes...she wants my attention all the time and wants to cling onto me, but I have so many other learners to see to in my class...”

Mrs Govind (E) from School C explained, “...with our limited staffing...it’s difficult when you have so many learners to see in class...I have 9 learners with ASD in my class.”

Mr Krishna (E) from School A stated, “I have 3 learners with ASD in my class apart from having the other 13 learners with multiple disabilities... some of the learners get bullied...it’s difficult to see to so many learners in the class...don’t have sufficient personnel as the employment of personnel is another issue...”

The data presented the concerns from educators who emphatically mentioned that they have too many learners in their classes, thus affecting the teaching and learning programmes.

According to the PAM document (2016, p. 12), learners with disabilities and ASD fall within this category, requires additional support and the weighting norm for learners with autism is six, thus one ASD learner will add up to six learners in the mainstream school. Some participants alluded to having *9 learners with ASD* in their autistic unit. When that is calculated according to the weighting norms, it totals to an average of 54 learners per unit. Meanwhile, some educators indicated they had their autistic learners integrated into other classes, such as having *3 learners with ASD* besides *the other 13 learners that have multiple disabilities*. Those integrated classes have 15-16 learners per class. In some schools, there was an average of 3-4 learners with ASD apart from the other learners with multiple disabilities per unit. The ideal teacher-learner ratio should be 1:6 with a maximum of 1:8.

Mr Krishna(E) from School A also alluded that overcrowded classes were as a result of having "*limited staffing*" at the school. The moratorium on staffing is impacting classroom delivery (KZN HRM Circular No. 41 of 2012). The data also revealed that learners with ASD can become victims of "*bullying*" and "*cling to the educator*" which sometimes goes unnoticed by the educator due to overcrowded classes. Furthermore, overcrowded classrooms prevent learners from concentrating on the lessons. learners with ASD struggle with focus and attention, and the invasion of personal space and feelings of being crowded both contribute to the lack of focus (Raisingchildren, 2018). learners with ASD get easily distracted by noises that are close to them in an overcrowded classroom and this can exacerbate behavioral issues (May, 2017). Furthermore, learners with ASD have sensory processing disorders, the "*noise*" in the classroom can lead to behavior issues, such as a sensory overload which is a breakdown in the child's self-confidence, and diminish their willingness to learn (Cervera, 2017). Sensory overload is common, as autistic children are not able to filter out irrelevant sensory information, such as random noises or images, while they are trying to process the important information they need from educators or classmates (SOTadmin). The programmes for learners diagnosed with autism are also individualised as each learner has their own set of demands and challenges (Saggers, 2016).

Mr Reddy (E) from School B stated, “...each learner’s programme is individualised but there are too many learners to see to with so few staff...”

This educator made a realistic statement as learners with ASD' programmes are individualised to suit their abilities and needs (Jackson, 2015), however, overcrowding in classes poses a huge challenge for educators to achieve those individual outcomes which are accentuated by “limited staffing”. Moreover, parents want educators to address their child’s individual needs which educators endeavor to do, as they want to help the learners in their classes who have exceptional differences, however, it becomes challenging when class sizes are too large (Bailey, 2018). The demands on the educator becomes overwhelming when the parents’ expectations are high and there are challenges in the class. Although educators draw up Individual Education Plans (IEPs) for learners with ASD early in the year, it is difficult to meet those objectives for each learner when classes are too large. The findings of the overcrowded classes were revealed by the data, such as the number of learners in an ASD class and an integrated class in relation to the weighting norms and teacher-learner ratio. Furthermore, the manifestations thereof were that of a shortage of human resources due to the moratorium on support staff posts which impacts the teaching and learning of learners with ASD besides the impact it has on learners diagnosed with autism.

7.3 CONCLUSION

This chapter presented the challenges that educators and parents experience in the teaching and learning of learners diagnosed with autism. Some of the challenges experienced by educators were similar to those of parents but those challenges were dealt with differently in different contexts. Hence the findings thereof were, educators lacked knowledge and experience with learners with ASD besides not having a proper curriculum, lack of resources to teach learners with ASD, and overcrowded classrooms. Hence, the data also revealed that the moratorium on the employment of support staff has impacted immensely on classroom delivery as educators feel fragmented in the teaching and learning of learners

with ASD. Educators also experienced a lack of support and guidance from stakeholders to achieve the individual outcomes of learners diagnosed with autism.

The school is the immediate environment where direct interaction of activities and relations with others takes place, including objects that they are in direct contact with; thus, this is underpinned in the microsystem of the ecological theory of Bronfenbrenner (2018). The objects in this context are the parents and educators that the child is in direct contact with and are considered as being important, as they provide the basic structure of a child's social life and they are mediators between the child and the larger world. Consequently, if this microsystem of the ecology is not steady then the system becomes debilitated, thus this hampers the activities in the child's life. Hence in this study, the challenges that educators and parents experience hamper the teaching and learning of learners with ASD. The next chapter is also part of the data presentation chapter, but it will encapsulate the mitigation of the vulnerabilities experienced by learners diagnosed with autism.

CHAPTER EIGHT - DATA PRESENTATION – THEME 3 STRATEGIES TO MITIGATE THE VULNERABILITIES

“Kids have to be exposed to different things in order to develop. A child’s not going to find out he likes to play a musical instrument if you never exposed him to it...”

Temple Grandin (2018)

8.1 INTRODUCTION

The final chapter of the data presentation relates to the ultimate question of my research, learners diagnosed with autism were extracted from the data generation process, thus I was able to identify and highlight some of the intrinsic and extrinsic vulnerabilities experienced by learners with autism. The intrinsic vulnerabilities included their personal, social, and educational vulnerabilities whilst their extrinsic challenges included bullying, victimisation, and stigmatisation. Entrenched within the inclusive pedagogical philosophy, the current qualitative study executed individual interviews and observations with eighteen educators and eighteen parents. They described the intrinsic and extrinsic vulnerabilities that learners face, and emphasised the challenges experienced in many areas of their daily lives.

8.2 MITIGATION OF VULNERABILITIES

According to Bateman (2019) mitigation is defined as the action of reducing the severity, seriousness, or painfulness of something and in this case, it is an ASD which is a global epidemic. This global epidemic is growing at a fast pace and has dramatically increased over the last decade (World Health Organization, 2018). Thus, learners with ASD in this study experienced a plethora of intrinsic and extrinsic vulnerabilities, and the mitigation of these vulnerabilities entailed addressing the ultimate research question. Subsequent to the engagement of the data, there were numerous vulnerabilities identified, thus the mitigation thereof was as follows.

8.2.1 Intrinsic vulnerabilities

(a) Transitioning

According to Larkey (2018), the transition includes the change in teacher, change in a room, change in learners in the class, change in activities not just starting preschool, school, and beyond. Sagers (2016) adds, some learners with autism struggle with transitions, hence they are uncomfortable changing from environment to environment, while others have problems moving from activity to activity. These changes can be extremely difficult causing stress and feelings of disorientation. Furthermore, The National Autistic Society (2017) maintains that the nature of learners diagnosed with autism, is such that transition can be extremely stressful, regardless of age or how big or small the change is. Even a change in educator or going to school or any other area, can be construed as moving into a foreign country for an ASD learner, thus creating anxiety and stress. The data comprised of a composition of educators and parents' perspectives, including the researcher's observations of transitioning vulnerabilities as a personal vulnerability experienced by learners diagnosed with autism in different contexts, however, the mitigation of such vulnerabilities were approached differently by educators and parents.

Educators' perspectives on the mitigation of transitioning vulnerabilities experienced by learners diagnosed with autism

Mr Khan (E) from School E mentioned, *"...when they come in... it's quite a struggle to get these learners with ASD settled in class. they have high anxiety levels; they cry and are cling whilst some of them withdraw ...some would hold onto your leg...when you push them away...they tend to bite and hit... but eventually they settle at their own pace when we introduce them to the sensory room which is a therapeutic room used to help them calm down."*

Miss Geeta (E) from School A explained, “...when she comes to school, she tends to scream and cry...we would give her the macaroni and almonds which her mum used to send everyday...that used to help her calm down...”

Mrs Ndlovu (E) from School E stated, “...some of them when they come to school...they are not their usual selves... so we apply some deep pressure or brush them which makes them feel better...eventually they settle down.”

Mrs Geeta (E) from School A stated, “...learners with ASD don't like change...so when we are going on an excursion or school outing then we compile a social story and use pictures...This is read to them at least for a week up to 2 weeks ...so that they are prepared for this change...”

The data presented crucial observations regarding the transitioning vulnerabilities diagnosed by learners with autism. To eliminate such challenges, educators considered what works for each learner diagnosed with autism as strategies vary from learner to learner due to their uniqueness (Saggers, 2016), namely some educators introduced learners to a sensory room. According to Ray (2017), a sensory room is a therapeutic space that includes lights, colors, sounds, sensory soft play objects, and aromas that provides learners with autism and special needs with personalised sensory input, thus this helps them calm and focus themselves so they can be better prepared for learning and interacting with others. My personal observation of these sensory rooms is that it has a very calming and instant effect on learners diagnosed with autism as it includes Astroturf, which is green in color and that has a soothing effect on the autistic learners besides the texture of the Astroturf, the subtle color of the wall and the therapeutic objects and light calming music (Grandgeorge and Masataka, 2016).

Whilst the sensory room is a strategy that some educators utilise as they are fortunate to have a sensory room in their schools, some schools do not have sensory rooms so they use alternate strategies to calm learners with ASD. Mrs Ndlovu (E) from School E stated, “...I

would apply deep pressure or brush them to calm them”. This application of deep pressure stimulation (DPS) is a therapy where weight is used to eliminate feelings of anxiety and stress (Bestbeir, 2017). By using a soft-bristled brush, and *brushing* their hair going to the back will help to moderate feelings of distress (Hobbs, 2020). Miss Geeta from School A mentioned, “...we would give her the macaroni and almonds which her mum used to send everyday...that used to help her calm down...” The “*macaroni and almonds*” were her source of comfort and would calm her, hence as the crunchy texture would help her regulate her sensory input, thus eliminating anxieties (Attwell, 2019). Educators tend to learn what the learner likes and dislikes, so they use a strategy that is most comforting to the learner. In addition, to mitigate the transition vulnerability the learner could be prepared for transitions to places, people, and activities through “*social stories and pictures*” which is “*read constantly for a period of one to two weeks*” as Miss Geeta (E) from School A, mentioned that autistic learners “*don’t take well to changes*”. Hence, the more educators understand learners’ strengths, the sooner they can accommodate those needs, and the more the learners will soar and settle down (Child 1st, 2019). Those were some strategies that educators in this study used to mitigate the transitioning vulnerabilities experienced by learners diagnosed with autism. However, although parents experienced transitioning vulnerabilities with their Children with ASD in different contexts, their approach in mitigating these vulnerabilities was somewhat different.

Mrs Maharaj (P) from School C indicated, “...we took him to an entertainment area, he screamed and screamed until he got his pacifier, he is now 13 years and he still looks for his pacifier when we take him out of the house...”

Mrs Paul (P) from School E stated, “...whenever we took him anywhere...he would grab a spoon before we leave home...if he didn’t have it, he would get very upset...that spoon used to be his source of security and comfort...”

Parents being the primary caregivers for their Children with ASD understand a child’s needs best (Hansen, et al., 2018). Mrs Maharaj (P) from School C stated that whenever she took her ASD child out of the house, he would look for his “*pacifier*” whilst Mrs Paul (P)

from School E, mentioned that her son would latch on to a “*spoon*”. Transitioning to unfamiliar places was overwhelming for these learners with ASD, hence they had different sources of comfort as a means of security to keep them calm. They were more drawn to an ‘object-based approach’, such as “*pacifier and spoon*”. The moment these children had their “*meltdowns*”, they were handed these objects, which would somewhat have an instant calming effect. Although it was stressful and overbearing for parents’ they had already identified and implemented a strategy that would make their Children with ASD feel calm and secure.

The data revealed that Children with ASD find transitioning to unfamiliar activities, places, or people overwhelming and make them feel anxious which is a sensory processing disorder and the mitigation thereof would be to plan and prepare Children with ASD for changes in routine, places, and activities so that they will be able to transition at ease like any other individual.

(b) Differing sensory needs

Sensory needs according to Wilmot (2018), is an integration that provides a foundation for more complex learning and behavior that demands effort and attention with no guarantee of accuracy, which happens automatically for a neurotypical individual. Sensory challenges can affect the learner’s ability to take in information, respond to requests, participate in social situations, write, participate in sports, and maintain a calm and ready to work state. This could either be exacerbated through internal imbalances or in response to environmental sensations. The sensory and emotional regulation of a person with autism can become overwhelmed and result in anxiety and distress (Grandin, 2015). Some learners with ASD have trouble handling the information their senses take in, namely sound, touch, taste, sight, and smell and, also two other less well-known senses that can be affected - the first is a sense of body awareness which is proprioception, while the second involves movement, balance, and coordination which is known as vestibular (Child Mind Institute, 2020). The data indicated that educators ascertained the different sensory needs that

learners with ASD experience at school and in the classroom *per se*, and parents highlighted the sensory needs that their Children with ASD experience at home, thus the mitigation of such sensory needs was approached differently at school and home.

Educators' mitigation of sensory needs experienced by learners diagnosed with autism

Miss Geeta (E) from School A mentioned, “...*she screams when she's around a lot of people...so we use earmuffs to block out the noise...*” She further elaborated, “...*she's hypersensitive to noise...so we sometimes give her macaroni or almonds...depending what her mum sends...which helps to calm her.*”

Mr Khan (E) from School E explained, “...*when they come to school...they have high anxiety ...they cry and become clingy...so we put them in a calming room...a place where they can calm down...we also have a trampoline and AstroTurf outside the classroom...*”

Mrs Joseph (E) from School D stated, “...*sometimes when he is upset especially when they can't grasp their work...they get frustrated and overwhelmed which triggers a meltdown. We know he doesn't like touch, so we hold him down or put a pressure weight blanket around him and talk him through to calm him...count him to 10 to breathe in and out so eventually he calms down...*”

She further elaborated that, “...*you got to know each child cos each child is different so we have an Individual Education Plan so we somewhat know what triggers them... and what can work to calm them...some of them ...we just need to take them for a walk in a quiet place, so they calm down...*”

Mrs Ndlovu (E) from School E expressed, “...*some of them when they come to school...they are not their usual selves... so we apply some deep pressure or brush them which makes them feel better...eventually they settle down.*”

The educators very emphatically stated that each learner has their own sensory needs depending on their triggers. Miss Geeta (E) from school A stated that they “*use earmuffs to block out the noise*” or give the child something to eat, such as “*macaroni or almonds*” for self-regulation, whilst some educators will put learners into a “*calming down room*” (sensory room). From literature (Child Mind Institute, 2020), sensory processing problems tend to come in two types, under and over-sensitivity, although it is common for one child to experience both kinds, hence, they can be hypersensitive, and are extremely reactive to sensory stimulation. They can find it overwhelming, for example “*putting a heavy weighted blanket around them*” to ease sensory disorders or they can be hypersensitive or under-sensitive, which makes them want to seek out “*more*” sensory stimulation, such as being “*clingy*” or sometimes they “*just want deep pressure*”, like a bear hug.

Learners on the autism spectrum have difficulty processing sensory information and this may impact their behavior (National Autistic Society, 2019), often resulting in “*meltdowns*”. According to Wilmot (2018), different strategies can be used to avoid such “*meltdowns*”, namely a child that dislikes loud noises, such as the school siren, is particularly sensitive so “*earmuffs are used to block out the noise*” as stated by Geeta (E) from School A. Sometimes educators find that autistic learners get frustrated and overwhelmed especially when they cannot grasp their work, some would just flap their hands or stim, whilst some result in meltdowns. This flapping of the hands or stimming that is exhibited by autistic learners is a self-stimulatory, stereotypic behavior that helps autistic learners to self-regulate to overcome their anxieties (Hobbes, 2020). This occurs when there is a sensory overload and this is usually caused when learners with ASD cannot filter out irrelevant or excessive information, delayed processing, and distorted or fragmented perception, resulting in anxiety, confusion, frustration, and stress that may lead to hypersensitivity (Bogdashina, 2016). These learners seek more sensory input than others, for example, “*the trampoline*”, which helps them to self-regulate (Wilmot, 2018).

Mr Khan (E) from School E stated, that the school has “*AstroTurf*” for their learners with ASD, thus the colour of the “*green AstroTurf*” is known to have a calming and soothing effect on Children with ASD (Grandgeorge and Masataka, 2016), also the environmental enrichment is capable of ameliorating symptoms of ASD, thus stimulating sensory input (Arnoff, et al., 2018). It is therefore imperative to learn about each ASD learner’s sensory needs and adapt their environment to help them cope with their daily activities (Davis and Dubie, 2019), as educators mentioned that they formulate an *Individual Education Plan (IEP)*, which helps them to accommodate each learner's sensory needs as each ASD learner on the spectrum have different needs (Jackson, 2015). Although educators have Individual Education Plans for each learner, they require the intervention of occupational and speech therapists.

Miss John (E) from School F stated, “...*we engage the speech and occupational therapists to help with our learners with ASD...they see the learners with ASD individually and sometimes it’s group activities... they break the information step by step ... the speech and occupational therapists work in collaboration to help learners with ASD ...they also help learners with speech through songs, body movement and play... they also engage the educators in their programmes so those strategies and therapies can be reinforced in the classroom... so it is a holistic approach.*”

The collaborative approach and interventions of “*speech and occupational therapists*” assist “*educators*” in determining learners with ASD’ sensory needs. These challenges are addressed through sensory integration therapy using “*songs and body movement*” (proprioception) which helps learners with ASD in sensory regulation (Child Mind Institute, 2018). Therapists play a pivotal role in the regulation of learners with ASD’ sensory processing disorders (Wilmot, 2018). Therapists also use “*play activities*” which is a multidimensional phenomenon that motivates learners with ASD in the attainment of motor planning and praxis skills. It also improves their concrete thinking, such as entertainment, spontaneous problem-solving skill, and creativity, which requires the collaboration of different disciplines, such as therapists and educators (Bumin, et al., 2015,

p. 101). The data presented the educators' experiences of learners with autism, sensory processing disorders, and the mitigation thereof, in that each learner with autism is different from the other, hence the mitigation of their sensory needs was dependent on environmental stimuli, thus their intervention for each learner was approached differently to accommodate and improve autistic learners' activities of daily living (ADL). Those were some of the strategies and approaches that educators engaged to mitigate the sensory needs of learners with ASD, however parents experienced similar challenges, however, the mitigation of these sensory needs was approached differently.

Parent's mitigation of the sensory need vulnerabilities experienced by learners diagnosed with autism

Mrs Maharaj (P) from School C indicated, “...when we took him anywhere new ...he would scream until he got his pacifier, he is now 13 years and he still looks for his pacifier when we take him out of the house...he also didn't like wearing his shoes, he would take it out and rip it apart...we went through many pairs of shoes each year...then I started taking him for speech and occupational therapy...this helped me a lot in managing his sensory issues...” She further elaborated that “...sometimes when he had his meltdowns ...it used to be very bad...we would take him for a drive...he likes motion...or he would tear up the newspaper or magazine in pieces until he was satisfied...then he would settle down...”

Mrs Sunker (P) from School C mentioned, “...when he's in public...he plays with my hair...wraps it around his fingers... which would keep him calm...”

The data showed that parents realised their children's sensory needs and approached them accordingly. Mrs Maharaj (P) from School C mentioned that she realised that “environmental changes” were overbearing for her ASD child, which would affect “his behavior so she would give him a pacifier”. This “pacifier” would help him self-regulate, thus overcoming his anxieties in unfamiliar places and Mrs Sunker (P) from School C mentioned that her child would feel calmer by “having her hair wrapped around his

fingers.” This is called tactile stimming, a sense of touch that gives a sense of comfort and relief from their stressors (Barloso, 2020). These parents were able to see the sensory input challenges that overwhelm their children, thus they were able to identify their sensory needs, such as the *“pacifier”* (Wilmot, 2018). Some Children with ASD’s nervous systems are wired so they do not efficiently process sensory input, and this can contribute to behavioral and emotional problems. Mrs Maharaj stated that *“his meltdowns would get so bad”* but would feel relieved after he went for a *“drive”*. That *“motion”* helped him self-regulate besides his tactile self-regulation, including *“tearing up the newspapers and magazines”* (Barloso, 2020).

However, according to Davis and Dubie (2019), a sensory diet can provide or modify sensory input to help meet the needs of these children to feed or nourish a child’s nervous system so that they can achieve optimum attention to tasks and performance of activities. These sensory diets help to calm learners and are usually incorporated in the sensory integration therapy by the *“occupational therapist”* (Kelly, 2018). This was affirmed by Mrs Maharaj who mentioned that therapists *“helped her a lot in managing her child’s sensory needs”*. The data revealed that each ASD learner is unique, and their sensory needs differed so the parents’ mitigation of their Children with ASD’s sensory needs were approached following their sensory input challenges.

(c) Communication and routine

Routines promote communication and understanding for children with disabilities. ASD is about learning how to communicate with others and it is vital for Children with ASD to be able to make their wants and needs known. It is also important for them to understand what is happening around them, and to have social interactions with other people (Family Connect, 2018). Children with ASD have an insistence on sameness and inflexible adherence to routines, such as extending down to minute details, for example, placement of toys, types of foods available at certain meals, and the order in which they may be eaten (Applied Behaviour Analysis, 2019). According to Boardman (2019), this insistence on

routine and sameness can only be categorised as obsessive and compulsive and any deviation from any of these particulars, even one almost undetectable to a neurotypical individual, can result in enormous anxiety and tantrums from an ASD learner. The daily routines for Children with ASD can be an important tool for developing his interest in communicating and increasing his communication skills, hence, routines are activities in an ASD child's life in which he participates, and that happens consistently the same way every time (Raising children, 2017).

The data revealed that learners with ASD in this study were on the lower spectrum of autism, thus some of them were non-verbal and/or had comorbid autism. Hence, learners with ASD experienced challenges with communication and routine which was ascertained through the perspectives of educators, parents, and the researcher's observations in different contexts. From this landscape, I present the educators' perspectives of the mitigation and the parents' perspectives of the mitigation of communication and routine vulnerabilities experienced by their Children with ASD.

Educators' perspectives on the mitigation of communication and routine vulnerabilities experienced by learners diagnosed with autism are as follows:

Mr Khan (E) from School E mentioned, "*...we use AAC (Augmentative and Alternative Communication) and Makaton sign language to communicate...its multi-faceted...we also tell the words, so they lip read...*"

Mrs Joseph (E) from School D explained, "*.... I use schedules for my daily programmes, so my learners know what is expected for the day. This gives them routine and structure...*"

Mrs Ndlovu (E) from School E stated, "*...we have lots of picture cards on the wall...we also carry them with us so that learners can communicate...especially the non-verbal learners...*" She further elaborated, "*...we have pictures next to each activity on the timetable...so they know what to expect next...*"

The data demonstrated the different strategies that educators use to mitigate the communication and routine vulnerabilities experienced by learners with autism. Mrs Ndlovu (E) from School E stated, they “*use Augmentative and Alternative Communication and Makaton signing*”, which helps learners to “*communicate*”, whilst some educators use “*picture cards*” to promote communication. Mrs Joseph (E) from School D explained that she uses “*schedules to prepare her learners for each day’s activities*”, thus her entire timetable is done in pictures so that learners with ASD understand and know “*what to expect*” for the day, thus building “*routine and structure*” to promote communication. From the literature, Trembath (2015) stated that children with autism are often described as “*visual learners*” and said to “*think in pictures*” and accordingly, educators and therapists routinely prescribe picture-exchange communication systems (PECs) to support their learning. From the data, I gauged that educators use different communication and routine strategies that best suit the learner as each ASD learner has their own unique challenges and demands (Jackson, 2015) This helps promote communication and routine in learners with ASD. Whilst those were educators’ strategies and approaches in mitigating the communication and routine vulnerabilities, parents had similar challenges with the communication and routine with their Children with ASD but their approach in mitigating such vulnerabilities were slightly different.

Mrs Moodley (P) from School B mentioned, “*...he is non-verbal...he communicates using sign language and writes on your hand. He also has a specific sound for yes and no...*”

Miss Khumalo (P) from School A elaborated, “*...he just won’t talk...he just points at things...when he wants something then he will take me by my hand to that spot...points to it until he gets it...*” She further elaborated, “*...when he comes from anywhere...he runs to his room...looks around...makes sure his toys are in the same order...he did the same thing every day...he would play with his toys and set it in the same order every day.*”

Parents indicated that their children with autism had different approaches to communicating, namely, some would use “*sign language*”, and at times “*writes on hand*”

whilst Miss Khumalo (P) from School A mentioned that her ASD child points at things to express his needs and demands. She further elaborated that he insists on routine and “sameness” which is associated with their obsessive-compulsive behavior (Applied Behavior Analysis, 2019). Children with ASD tend to do best when they have a highly structured schedule or routine (Smith, et al., 2019). The data also revealed that learners with ASD have their own unique way of communicating, especially non-verbal learners as they have special cues, such as “*he has a specific sound for yes and no.*” Hence, the data presented parents’ mitigation of communication and routine by making pertinent observations of their non-verbal Children with ASD which are crucial to communication and routine. These include “*pointing to things, specific sounds*”, and facial expressions however, “*sign language*” seemed to be invariably a means of communication with Children with ASD at school and home and the manifestations thereof was that of consistency and reinforcement promotes communication and routine.

(d) Socialisation

Socialisation is an impairment that learners with ASD experience, thus they struggle to interact and communicate with people (National Autistic Society, 2017). According to Saggars (2016), interacting socially and communicating with others are common challenges among learners on the spectrum and will have an impact on every aspect of their lives. Difficulties with social communication are however a diagnostic criterion for autism and they present in a spectrum of ways, for example, some people on the autism spectrum may seek social opportunities and may initiate social interactions themselves, others may enjoy social situations and interactions when they are initiated effectively by others. However, many have a genuine desire for friendship but may find the process of making and sustaining friendships difficult (Autism Tasmania, 2018). The data presented the social communication challenges that learners with ASD experience which affects their daily living. Hence, from this prelude, I present the educators’ mitigation of the socialisation and communication vulnerabilities that learners with autism experience and the parents' mitigation of these vulnerabilities. These vulnerabilities were experienced in different

contexts and the mitigation of these vulnerabilities was approached differently by educators and parents.

Educators' mitigation of social communication vulnerabilities experienced by learners diagnosed with autism

Mrs Singh (E) from School B stated, “...*she barks like a dog to get the other learners' attention...I think she wants to make friends, but she doesn't know how to do it...the learners laugh at her...so I'm trying to engage her in a social story so she can understand and learn how to make friends...*”

Miss Chetty (E) from School D maintained, “...*I re-arranged my learners' desks so that they can engage in group activities...with the aim of them initiating social communication...*”

Mr Khan (E) from School E expressed, “...*we give our learners' picture cards when they go on breaks so that they can use the cards to communicate with their peers...especially the non-verbal learners...we want them to socialise...*”

The data presented the different approaches that educators use to mitigate the social communication vulnerabilities that learners with ASD experience. ASD is a developmental disability that can cause significant social, communication, and behavioral challenges (National Institution for Deafness & other Communication Disorders (NIDCD), 2018). Therefore, educators endeavour to mitigate these challenges by “*re-arranging learner's desks so that they can engage in group activities...with the aim of them initiating social communication*”, also in re-arranging their desks educators should identify peers who model strong social skills and pair the learner with them (Autism Speaks, 2018). Furthermore, providing an appropriate learning environment can be as central to a learner's success as any teaching strategy or educational tool (Saggers, 2016).

The data also presented the difficulty learners with ASD experience concerning making friends, and they may behave inappropriately to get their peers “*attention*” (Autism Tasmania, 2018), “*such as barking like a dog*”, hence, they may need help in developing social skills (National Autistic Society, 2018). For example, the engagement of “*social stories can make them understand and learn how to make friends*”. Friendships help Children with ASD develop socially and emotionally which can boost a child’s self-esteem and confidence (Raisingchildren, 2017). Learners with autism spectrum in this study are on the lower trajectory of the spectrum, thus having mental disabilities and comorbidities, thus causing difficulties in communicating both verbally and non-verbally, and in interacting socially (Isni, 2018, p. 20). However, educators “*use picture cards, especially for non-verbal learners to communicate and socialise with their peers*”. The mitigation of the socialisation and communication vulnerabilities from educators’ perspective was intrinsic to learners with ASD, thus the findings thereof were that of educators’ approach to each situation was in relation to their individual needs, hence, to initiate social communication skills. The parents experienced similar challenges, however, their approach in mitigating their socialisation and communication vulnerabilities were managed differently.

Mrs Maharaj (P) from School C expressed, “*...we would take him to the mall everyday...he would cry when he saw too many people, but we constantly motivated him. I persevered and gradually he started to greet and talk to people...*”

Mrs Sunker (P) from school C maintained, “*...he would run away into his room when visitors came so I used to talk to him about that behavior after the visitors left. We always encouraged him to just sit with us when visitors come even if he doesn’t want to talk to them. With time, and by watching us speaking to people...he started talking to the visitors...*”

Mrs Paul (P) from School E further added, “*...he would just play by himself...I started inviting my friend who had a child who was the same age as my son...I introduced*

them...they started sharing their toys then they slowly became friends...started talking and playing together, however it wasn't for long periods, but we always encouraged him..."

The data presented some of the parents approaches to the mitigation of social communication vulnerabilities that their Children with ASD experienced. Mrs Maharaj (P) from School C mentioned that they "*persevered*" in their child's social communication vulnerability, by taking "*him daily to the same mall until he started greeting and talking to people*". National Autistic Society (2020) maintain that Children with ASD find it bewildering and stressful being around people as they lack the ability to socialise, however when they are supported and motivated then they feel a sense of calmness and can grasp basic skills, such as social skills. They take longer than other children to learn social skills (Raisingchildren, 2020), however, if the same skill is repeated daily then the child tends to grasp and learn the skill correctly (Brown, 2017). For example, "*the perseverance in taking the child to the mall daily*". Also, some learners with ASD are more visual and learn by watching what they want to learn (State Government Australia, 2017). For example, Mrs Sunker (P) from School C mentioned that "*after watching us speaking to people...he started talking to visitors...*"

In addition, parents have a unique way of influencing their Children with ASD through parent-mediated interventions (Shire et al, 2016). Mrs Paul (P) from School E, initiated a play session with her friend's neurotypical child but they were of the same age. Raisingchildren (2020) stated that typically developing children can be great role models who encourage good social skills in Children with ASD. Furthermore, if the child shares abilities and interests with other children, this can give him/her good social relationships and a sense of belonging. Hence, the data presented the parents' mitigation of social communication vulnerabilities experienced by their Children with ASD and the findings thereof were that parents persevered in their quest for their autistic children to engage in social interaction skills through their motivation and role-playing.

(e) Toileting problems

Toileting problems are common in children with ASD, they often have difficulty withholding a bowel movement, toileting readiness, fecal smearing, constipation, continued use of diapers, elimination on the floor or other inappropriate places (Bennie, 2019). They show same signs of readiness for toilet training as typically developing children, however, these signs appear when the child is older and the training might take longer (Raisingchildren, 2017). According to Barnhill (2016), these toileting difficulties are a result of limited diet and low fluid intake thus causing dehydration which slows down the colonic motility whereby more water can be absorbed, resulting in not only a decreased number of bowel movements, but also stools that are harder, denser, and drier. The other problem, according to the Autism Awareness Centre (2018) is interoceptive awareness, whereby the receptors that are located throughout the inside of our body, in our organs, muscles, skin, bones gather information from the inside of our body and send it to the brain, thus the signal of a full bladder or needing to eliminate does not reach the brain so there is no impetus to get to the toilet or the sensation of needing to go is felt too late (a full bladder to the point of bursting). The mitigation of these impairments can be challenging for educators and parents. Therefore, I illustrate the educators and parents' mitigation of these challenges by using a variety of approaches and strategies, as the toileting problems experienced by learners with ASD were approached differently by educators and parents.

Educators' mitigation of toileting problems experienced by learners diagnosed with autism

Miss John (E) from school F stated, “...*toileting is a huge problem with these learners with ASD...so we use pictures to show them the toilet.... fortunately, we have toilets near their class which is only for the learners with ASD...*”

Mrs Marie (E) from School C mentioned, “...*learner was on diapers...then I used pictures to show the process step by step...she would sometimes use the toilet after a long wait in the toilet and sometimes she just won't but as soon as we get back to the class, she would*

soil herself...we also stick the pictures on the wall of the toilet...” She further elaborated, “... I also tried using social stories to train her to use the toilet independently...”

The data indicated that educators used different kinds of strategies to mitigate the toileting problems that their learners with ASD experience. Miss John (E) from School F mentioned that she used picture cues to toilet train an ASD learner. According to Raisingchildren (2017), children with autism are often visual learners, thus visual supports, such as “*pictures*” can help to reinforce the routine of using the toilet. This is known as the Picture Exchange Communications (PECs) (Bennie, 2019). Furthermore, by sticking pictures on the wall, “*showing step by step process*” will help with toilet training learners with ASD (Autism Speaks, 2016). Mrs Marie (E) from School C mentioned, that as soon as they brought the child back to the class, she would soil herself. This was as a result of problems with interoceptive awareness, thus the sensation of needing to go to the toilet is felt too late (Autism Awareness Centre, 2019). Consequently, according to Raisingchildren (2017), all children with ASD are different and what works with one child might not work for another, thus sometimes a combination of approaches need to be used to meet the outcome, such as using “*social stories*” that can contribute to the toilet training process. The data revealed that educators used a variety of strategies, sometimes a combination of strategies until the outcomes were achieved to mitigate the toilet training vulnerabilities that learners with ASD experience. However, parents also experienced toilet training challenges with their Children with ASD, but their mitigation of these challenges was approached differently.

Mrs Sunker (P) from School C expressed, “... *he wouldn't want to go to the toilet, he was so afraid of the pan...when I used to put him on the pan...he would scream...one day he just locked us both in the toilet... I sat in the toilet with him...eventually he used the toilet...he started clapping ... it felt as if they were playing a game...*”

Mrs Maharaj (P) from School C mentioned, “... *every 15 minutes she used to wet himself...his dad used to get so upset...he said we should just keep him on his diapers, but*

I persevered...I would go put him on the pan...which I did continually then he started going to the toilet...”

The data presented parents’ challenges with toileting their children and their mitigation of the toilet training process, included, *“perseverance from parents”* as Children with ASD experience high anxiety levels and the transitioning from diapers to the toilet is quite challenging (Bennie, 2019). Furthermore, according to Raisingchildren (2017), toilet training could be associated with other behavior problems, like being afraid of the toilet, and continually flushing the toilet. However, Brown (2017) states that with Applied Behavior Analysis (ABA) therapy, one of the principles is to repeat things the same way each time so the child has a better chance to learn the skill correctly, such as *“mum put her child on the toilet pan continuously”* until he mastered the skill. Hence, the reinforcement, encouragement, and support, for example, *“sitting with him in the toilet until he urinated which turned into a game”*, motivates an ASD child to be toilet trained (Raisingchildren, 2017). The data disclosed the different approaches that were used by both educators and parents in the mitigation of the toilet training challenges that learners with ASD experience and the findings thereof was that each child on the autism spectrum is different. Considering these learners were on the lower spectrum, their cognitive functioning was much lower, hence communication was a greater challenge for parents and educators but by using a variety and combination of strategies, the mitigation of these toilet training challenges was achieved.

(f) Problems with eating

According to Mayes (2019), atypical eating behaviors of Children with ASD may include severely limited food preferences, hypersensitivity to food textures or temperatures, and pocketing food without swallowing. Their preferences mostly include starches and snack foods and more frequent rejection of fruits and vegetables (Suarez and Crinion, 2015). Food selectivity in children with autism is associated with sensory modulation impairments, systemic gastrointestinal comorbidities, and social communication impairments, with food

aversion (especially towards specific textures and smells) associated with oral, olfactory, and gustatory hypersensitivity (Chistol, et al., 2018, p. 104). Hence, these restrictive interests and repetitive behaviors often demonstrated by children with autism lead to challenging behavior management and food selectivity, narrowing the variety of foods consumed (Autism Speaks, 2018).

From this backdrop, I will elucidate the mitigation of the eating problems experienced by learners diagnosed with autism. Learners diagnosed with autism in this study are from special needs schools, thus they have a meal training programme at school, whereby educators experience challenges with autistic learners' eating problems. Hence, the study aims to focus on the educators' mitigation of the eating problems of learners diagnosed with autism at school and the parents' mitigation of their autistic children's eating problems at home. Separating the contexts within which the autistic learners experience their eating problems allows me to illustrate how different contexts allow for the mitigation of eating problems experienced by learners diagnosed. For example, eating problems may be different at school and home and the mitigation thereof may be approached differently by educators and parents.

Mrs Marie (E) from School C explained, “*...this child would only eat Nik Naks chips and nothing else...so we decided to hide the bread behind some of the Nik Naks chips...eventually, he started eating bread and sandwiches. He not only learned to eat bread but also learned to hold his sandwiches on his own and eat at the table.*”

Mr Govind (E) from School C mentioned, “*...he loves mutton curry and rice....one day he had chicken giblets in his lunch...he was so upset...became violent so it's best to give them what they like to eat otherwise it results in behavior problems.*”

The data indicated that learners with ASD have limited food selection, such as, “*he would only eat Nik Naks chips*”, thus Children with ASD tend to have a strong preference for carbohydrates and processed foods (Autism Speaks, 2018). Furthermore, learners with

ASD enjoy foods that have lots of texture, crunch, and bite, as it helps them to self-regulate (Atwell, 2019), however, a child's eating habits can impact their health, such as gastrointestinal problems (Chistol, et al., 2018). To avoid such problems, there is a need to introduce new foods to their diet, for example, Mrs Marie (E) from School C, introduced the *"bread behind the chips"*, intending to gently build on his preferred food (Autism Speaks, 2018). Consequently, to eliminate eating problems, start with giving them what you know they like to eat. Mr Govind (E) from School C mentioned, that the child likes *"mutton curry and rice"* and gradually introduce new foods to avoid *"behavioral problems"* (Ansel, 2019). The data demonstrated the need for a gradual introduction of preferred healthy foods to mitigate the eating problems that learners diagnosed with autism exhibit. Parents also experienced similar eating problems with their autistic children, but their approach was somewhat different.

Parents' mitigation of eating problems experienced by learners diagnosed with autism

Mrs Maharaj (P) from School C indicated, *"...when we take him to the mall...he will want biltong...I don't like to give him that as it affects his tummy...gives him gastrointestinal problems so I slowly started introducing him to green veggies and salads...he loves peppers...now he eats a big bowl of salad everyday...he enjoys it..."*

Mrs Khan (P) from School D mentioned *"...she's a very picky eater... it's very challenging with her foods...she's very selective with her food..."*

The data reflected the parents' experiences and the mitigation of Children with ASD's eating problems. According to Attwell (2019), Children with ASD seek out foods that are strong in taste and flavor, such as, *"he wanted biltong"*, something that is spicy and chewy, which is associated to food selectivity in individuals diagnosed with autism, thus relating to sensory processing dysfunction, specifically oral sensory sensitivity, however it exacerbates *"gastrointestinal problems"* in Children with ASD (Chistol, et al., 2018). Hence, autistic children are very *"picky eaters"*, thus introducing new foods to children

with autism can be very challenging as they are “*selective*” and have their own meal preferences (Autism Soeaks, 2018). Therefore, it becomes easier to expand from what they eat, for example, Mrs Maharaj (P) from School C mentioned, that “*he loves peppers and crunchy green veggies*”, so “*I make a bowl of salad for him which he eats daily*”, this can be very nutritious and self-sustaining, thus this can make a world of difference in their ability to learn, how they manage their emotions and how they process information (Ansel, 2019). The data demonstrated the parents’ mitigation of eating problems experienced by their Children with ASD and the findings thereof was that of the gradual introduction of preferred meals by assisting and guiding them to their preferred meals to fulfill their nutritional needs despite them being picky eaters or selective with their foods.

8.2.2 Extrinsic vulnerabilities

(a) Curriculum

The term, curriculum according to Smith (2018) refers to the lessons and academic content taught in a school or a specific course or programme, hence, it is the knowledge and skills learners are expected to learn, which includes the learning standards or learning objectives they are expected to meet, the units and lessons that educators teach, the books, materials, videos, presentations, and readings used in a course; and the tests, assessments, and other methods used to evaluate learners’ learning. Consequently, the special needs of learners with ASD arise from their developmental difficulties but also indirectly by exclusion from “the socialization and culturalization process through which development normally takes place” (Mcintosh, 2018). Furthermore, autistic learners perceive the world in a fundamentally different way than those who do not have autism (Huagg, 2017). Their unique demands and challenges make them diverse from other neurotypical learners (Jackson, 2015), thus their programmes are also diverse and in keeping with their needs. From this backdrop, the educators in this study revealed the various strategies they use to mitigate the curriculum challenges that they experience.

Mrs Moses (E) from School D mentioned, “... *I was put in a class where I had autistic learners, but I didn't know anything about autism...no experience and we don't have a curriculum for ASD, so we had to adapt our programme according to the learners' abilities by drawing up Individual Education Plans (IEPs)...*”

Mr Krishna (E) from School A maintained, “...*there are no prescribed programmes for us to work with our learners with ASD...we design our own plans and programmes from our current CAPS curriculum to suit our learners' needs and abilities...*”

Educators made very significant assertions, in that “*there's no prescribed curriculum per se for learners with ASD*”, however, educators tend to “*adapt their current CAPS curriculum to suit learners' needs and abilities*” as each learner is unique and their programmes are individualised (Saggers, 2016). Furthermore, these learners with ASD fall within the lower trajectory of autism, thus the foundation phase programme suffices to adapt a curriculum for them. Consequently, educators draw up *Individual Education Plans (IEPs)* which cater to learners with ASD' individual needs which are per curriculum standards (Department of Basic Education, 2001a). Thus, access to a broad and relevant curriculum is essential for learners with ASDs to equip them socially and academically for inclusion as members of their community (Peters, 2015, p. 26).

Moreover, learners diagnosed with autism require a personalised curriculum that is carefully structured to take account of their communicative and cognitive level, sensory functioning, and motivations (Harwood, 2017). However, in adopting a curriculum to suit learners' needs and abilities, tasks must be relevant and purposeful to maximise motivation and to help learners make sense of the world around them (Department of Basic Education, 2001). The data revealed that although there is no prescribed curriculum *per se* for learners with ASD, the findings thereof was that the adaptations of their current curriculum and individual planning for each autistic learner on the spectrum concedes the mitigation of the curriculum challenges that would cater to the learners with ASD' individual needs and abilities.

(b) Bullying, victimisation, and stigmatisation

According to Verret (2020) bullying is a profound health problem in schools and social media, and bullying learners with ASD is becoming a major problem. Their inability to communicate their thoughts and feelings makes them easier targets for bullying and victimisation. Bullying victimisation is one of the most distressing experiences for Children with ASD particularly when it occurs over a prolonged period (Hebron, Humphrey, and Oldfield, 2015). Regarding the high risk of bullying victimisation in children with ASD, studies have proposed several possible etiologies, including communication problems, fewer friendships, stereotyped behavior and interests, and aggressive behaviors (Liu, et al., 2018). These aggressive behaviors are misconstrued as a lack of discipline or bad behavior, thus these Children with ASD get sidetracked with the negative stigma and misconceptions of ‘labeling’ (Total Spectrum, 2019). From this preamble, I provide the educators’ experiences and mitigation of bullying, victimisation, and stigmatisation of learners with ASD at school. I further provide parents’ experiences and mitigation of their Children with ASD being bullied, victimised, and stigmatised when they are taken to public places. The experiences and mitigation of bullying, victimisation, and stigmatisation were in different contexts, thus by viewing these vulnerabilities that learners diagnosed with autism experience in different contexts, will illuminate the different approaches that educators and parents use to mitigate the bullying, victimisation, and stigmatisation.

Educators’ mitigation of bullying, victimisation, and stigmatisation experienced by learners with ASD are as follows:

Mr Krishna (E) from School A mentioned, “...*after the break, I noticed he was withdrawn but fidgety and agitated...I approached him, he told me that another child was hitting and slapping him...bullying him...asked him what he did...he said he didn’t do anything... when I investigated the matter, he told me that the other learner hit him because he didn’t want to play with him...*” He further elaborated “...*so I called the other learner...he apologised*

to the child...but I mentioned to him the school rules... bullying is not allowed and that they are all friends...”

Miss Chetty (E) from School D expressed, “...*they become victims of bullying, they get teased... become socially withdrawn....as much as we are vigilant, it still happens....so we talk to them...*”

Mrs Moses (E) from School D explained, “...*I act as a mediator or a buffer zone, so I want them to work it out between themselves, so it doesn't happen again...*”

The data highlighted educators' experiences and mitigation of bullying, victimisation, and stigmatisation of learners diagnosed with autism. Mr Krishna (E) from School A mentioned, that a learner “*approached him, and told him that another child was hitting and slapping him, upon investigation he found that this child was being bullied*”, thus he called “*the other learner and asked him to apologise and*” reinforced “*the school rules to him*” intending to eradicate such behaviors in the future (Verret, 2020). The data also indicated that the learner was “*withdrawn and agitated*” and was perhaps afraid of reporting the matter. Thus, it is important to reassure the learner that you believe him, and he should not feel as if he is ‘tattling’ about the other learner (Hebron, Humphrey, and Oldfield, 2015). Other approaches that educators used to mitigate bullying, victimisation and stigmatisation challenges that learners with ASD experience at schools included, “*act as a mediator or buffer zone*”, also by “*talking*” to the so-called ‘bullies’ so that they will understand the autistic learners at school (Chua and Wong, 2016). The data revealed the different intervention strategies that educators engaged to mitigate the bullying, victimisation and stigmatisation challenges that learners with ASD experienced at school and the findings thereof was that of promoting awareness and acceptance of learners diagnosed with autism at schools. The parents experienced similar challenges in different contexts, thus their approach was different.

Mrs Maharaj (P) from School C explained, “...when we took him to public places...he would scream and cry...people would just stare at him and make absurd remarks but as we used to take him quite frequently to a public place so slowly people started understanding him...”

Mrs Sunker (P) from School C stated, “...when we used to take him out in public...he would scream and cry...people look at us as if we are bad parents saying ...oh that child is so badly behaved...they just feel like you are allowing your child to behave like that...they give you that judgmental kind of look...as if to say why couldn't you discipline your child...assuming that he badly behaves...”

She further elaborated, “...society judge parents of autistic children which withholds parents from taking their children out...they don't understand autistic children...people need to be made aware of autism rather than being judgmental and say, that child is naughty... they can lend a helping hand rather than just look and pass judgment...I used to attend a parent support group and this facilitator used to talk and create awareness of autism but I just think much more of that is needed...”

The data highlighted parents' challenges regarding how society views autism, hence, Mrs Sunker (P) from School C, mentioned that when they used to “take their son out in public, people” would just stare at you as a parent, disapproving your “child's behavior” as if your child lacks discipline, thus “assuming that he badly behaves”, they become “judgmental and lack understanding of autism”, hence, parents of Children with ASD feel stigmatised and victimised (Total Spectrum, 2019). This occurred due to misinterpretation of tantrums that occurred in public as misbehavior, triggering embarrassment, sadness, anger, and disbelief in parents (Sarris, 2015). Parents of Children with ASD felt that the lack of “awareness and understanding about autism” was a contributor to this stigma (Ooi, et al., 2016). The data also revealed that parents attempted to attend “parent support groups” which were aimed at supporting, guiding, and assisting parents of Children with ASD and creating public awareness, thus mitigating the bullying, victimisation and stigmatisation

challenges experienced by children diagnosed with autism. However, parents are still of the view that there needs to be more public awareness in light of ASD becoming more prevalent globally (World Health Organisation, 2019).

8.3 CONCLUSION

This chapter provided the phenomenology of educators and parents to mitigate the challenges that learners with autism experience. Thus, this chapter offered various strategies and provisions to ensure that learners with ASD can live their daily lives as typically developing learners without being ostracised and stigmatised. Learners with ASD face many challenges daily as discussed in the previous chapters, however, educators and parents persevered in mitigating these vulnerabilities. Findings thereof were that each vulnerability was approached differently in different contexts and environments, thus using the strategy that worked best for each ASD child as each one is unique with their own set of challenges and demands (Saggers, 2016). The perspectives from educators and parents, through the interviews and my observations, enabled me as a researcher to unravel the vulnerabilities that learners with autism experience. It further elucidated the mitigation of these vulnerabilities. Thus, this mitigation of vulnerabilities experienced by learners diagnosed with autism is a representation of Bronfenbrenner's (2018) ecological theory. His theory stated that we should first have to take into consideration the ASD child's self needs, traits, and life experiences which are the main areas that are affected and are the internal system, that focuses on the clinical and psychological perspective of ASD. This formed the microsystem of the ecological theory as the learners with autism have direct interaction with the immediate environment, including family, school, and the broader community. The next two chapters will comprise of the findings and recommendations.

CHAPTER NINE – DISCUSSION OF FINDINGS

“For autistic individuals to succeed in this world, they need to find their strengths and the people that will help them get to their hopes and dreams. In order to do so, the ability to make and keep friends is a must. Among those friends, there must be mentors to show them the way. A supportive environment where they can learn from their mistakes is what we as a society need to create for them.”

Bill Wong (Autistic Occupational Therapist cited in *The Art of Autism*, 2020)

9.1 INTRODUCTION

The discussion of the findings chapter is aimed at interpreting the results of the study and includes the major findings, significance of the findings, and how the findings relate to those of similar studies (Al-Obaydi, 2017). The three previous chapters descriptively presented the data on the perspectives of participants within the interpretivist-phenomenological paradigm. This chapter will postulate and provide an analysis of the research findings in this study. As discussed in Chapter Five, this study utilised the triangulation of two different sources to retrieve data, namely, semi-structured interviews and observations with three educators teaching learners with autism and three parents who have autistic children from each of the six special needs schools. This large sample of participants enabled me to retrieve an in-depth insight into the vulnerabilities experienced by learners diagnosed with autism and the mitigation of those vulnerabilities. From this data, themes and sub-themes were formulated. Thus, this chapter moves on to analysing the findings by drawing patterns from the findings and relate them to the literature that was presented in Chapter Two and Three and the theoretical framework in Chapter Four. Hence, this chapter presents the findings based on the following themes:

1. Types of Vulnerabilities, such as Personal Vulnerabilities, Social Vulnerabilities, and Educational Vulnerabilities
2. Challenges experienced by educators and parents in the teaching and learning of learners diagnosed with autism
3. Mitigation of Vulnerabilities experienced by learners diagnosed with autism

9.2 PURPOSE OF THE STUDY

This study aims to mitigate the multiple vulnerabilities experienced by learners diagnosed with autism. The data that was generated will attempt to respond to the core questions of this study which are:

- What are the vulnerabilities experienced by learners diagnosed with autism?
- What challenges do educators and parents experience in the teaching and learning of learners diagnosed with autism?
- How do educators and parents mitigate the vulnerabilities experienced by learners diagnosed with autism?

9.3 ANALYSIS OF FINDINGS

This analysis of the research findings is the final process of the research which will deduce the outcomes of the research findings (Flom, 2018). The findings of the study, *vis-a-vis*, participants views, and perspectives will be discussed hereunder taking into account the multiple vulnerabilities experienced by learners diagnosed with autism and the mitigation thereof.

In this section, I provide a summary of findings responding to the three research questions. Consequently, there were several findings in this study, but I have chosen the most pertinent findings based on the core research questions.

9.3.1 Vulnerabilities experienced by learners diagnosed with autism (Personal, Social, Educational)

9.3.1.1 Personal vulnerabilities of learners with autism experienced by educators and parents are similar in nature but vary in expression

Drawing from the data, personal vulnerabilities seemed consistent at home and school, however, it varied in expression. These personal vulnerabilities resonated with participants and it attempted to answer part of the first research question. The parents, who are the primary caregivers and first educators to their autistic children, and educators found that these personal vulnerabilities experienced by learners diagnosed with autism were similar. Moreover, the learners in this study ranged in the lower trajectory of autism, hence, their personal vulnerabilities seemed more pronounced than learners on the higher spectrum of autism and typically developing children. The findings of personal vulnerabilities were intrinsic and included transition, sensory issues, and personal care, which was exacerbated by anxiety. These findings cohere with past research (Vlok, 2015). This further coincides with Haelle (2018) view that personal vulnerabilities are the manifestations of anxiety, thus the mere thought of doing something or going somewhere new and unknown may cause feelings of anxiety. Albeit these personal vulnerabilities were consistent at school and home and there is therefore a need for greater collaboration between parents and educators to mitigate these vulnerabilities. From the data in Chapter Six, it was evident that the findings alluded to anxiety being the root cause of all their personal vulnerabilities, such as:

(a) Transitioning

Transitioning from place to place or from activity to activity is extremely challenging. Some learners would latch onto something as a source of “*security and comfort*” whilst some would have “*meltdowns*”, however when they were prepared for the transitional process, the outcome was somewhat different, hence they were able to cope much better than not knowing anything about the transition (Sevin, Rieske, Matson, 2015, pp. 329-342).

The preparation includes visuals, such as photos, schedules, videos, and social stories (Geoffrey Nixon, 2017). These artifacts are likely to improve their understanding and the ability to transition at ease. This suggests many children with ASD have a script in their minds for everything that happens in their day and their lives *per se*. It is therefore very important that with any change they are offered a script to explain those changes. Once they are offered a script to explain these changes, they then have a better understanding and cope better in those areas. This finding is different from that of other researchers as it provides a script (better understanding), to these learners with autism by using a variety of adaptive and maladaptive strategies, especially, visual cues to explain the setup and routine at their homes that are somewhat different from that of their classroom. The mediation is not aligned thus learners must be prepared for those transitions from home to school for them to realise that school is another medium of learning. Learners with autism become conditioned to the mediation at home and any deviations thereof can exacerbate behavioral issues. Therefore, it is crucial to prepare learners for these transitions and ensure minimal disruptions.

(b) Sensory issues

Autistic learners are over-sensitive or under-sensitive to environmental stimuli like taste, smell, sound, and touch, thus causing distractions and anxiety (Cervera, 2017). As much as autistic children have sensory processing issues, they need to be encouraged to communicate when anything is causing any harm or problem to them. Sometimes their sensitivities can be to an extreme, eliciting incessant screaming or crying as they are always afraid to attempt anything new or different. This is known as hypersensitivity (Raisingchildren, 2020). Participants indicated that such hyper-sensitivities needed intervention to eliminate their anxiety. Their responses are provided below:

Mrs Marie (E) from School C mentioned that, *“They are so set in themselves that trying to eat anything other than what they are conditioned to eat is absolutely challenging and it affects their gastrointestinal problems. The introduction of new food items needs to be*

subtle, for example, this child would only eat Nik Naks chips but gradually we introduced bread which we placed behind the chips. That was something new which the child didn't know and eventually acquired the taste for it."

Mrs Khan (P) of School D mentioned that *"...she used to eat sand, stones and bite the walls. She's also a very picky eater... it's very challenging with her food. If she doesn't like something, she would get upset. She prefers to eat the same food everyday..."*

Educators and parents had similar experiences and observations relating to the eating habits of learners diagnosed with autism. They become so conditioned to eating what they like, that they do not like to deviate from that, and they usually choose junk foods. However, it affects their digestion leading to *"gastrointestinal problems"*. Sometimes they crave inedible substance such as *"sand and stones"* due to their high oral sensitivities (Chistol, et al., 2018). Hence, parents and educators are of the view that learners with autism are hypersensitive to certain foods making them very *"picky eaters"*. This can elicit behavioral problems and it is therefore important for parents and educators to guide and assist learners to choose foods that are self-sustaining and nutritious to eliminate any kind of gastrointestinal problems and behavioral issues.

According to Sathe, et al. (2017), eating healthy foods especially, gluten/casein-free diets improved communication, challenging behaviors, and gastrointestinal symptoms in autistic children. The kinds of food that learners with autism eat can affect them, hence, one needs to carefully select foods according to the child's likes and dislikes. Notwithstanding that sometimes a child may choose foods that could cause harm to their body, namely, gastrointestinal problems, so parents and educators need to guide and introduce these learners to nutritious meals that will benefit them. This can be extremely difficult, however, one must be very subtle to gain maximum benefit as explained by Mrs Marie (E) from School C. A gluten/casein-free diet, e.g., fish and cereals, among other foods can stimulate brain development, thus improving communication and behavior (Bauset, et al., 2016, p. 26).

(c) Personal care

Learners with autism in this study experience difficulty with personal care, some associated with sensory issues, environmental stimuli and some lacked the necessary skills with tasks, namely toileting. Many children with ASD experience significant sensory sensitivities and struggle to manage the sensory input that they receive (Autism Speaks, 2018). For example, Mrs Marie (E) from School C indicated “...*the toileting was a challenge with this learner...she used to come to school wearing her nappies...I used to sit with her in the toilet with picture cards trying to toilet train her, but as soon as I brought her back to the class, she would mess herself...she just didn't like being in the toilet...*”

Mrs Sunker (P) from School C also mentioned, “...*I couldn't understand why he was so afraid of the toilet...he just did not want to use the toilet on his own...I sat with him in the toilet for hours...*”

According to the National Autistic Society (2018), this may include a dislike of the noise made by toilets, the sensation of passing urine/faeces, a cold toilet seat, or a preoccupation with water in the toilet. Whilst there are various factors that contributes to disliking using the toilet, a participant, Mrs Maharaj (P) from School C indicated, “...*when we take him to the mall...he will want biltong...I don't like to give him that as it affects his tummy...gives him gastrointestinal problems...*” Some experience gastrointestinal issues, hence, they have problems such as constipation which make going to the toilet painful. As a result, the child avoids this, which then makes constipation worse, leaving the child in a negative cycle (Chesterfield Royal Hospital, 2018).

Current evidence suggests that several environmental stimuli and circumstances, including transition, sensory issues, and personal care are related to the personal vulnerabilities experienced by learners diagnosed with autism, which is in relation to literature (Autism Speaks, 2018). Personal vulnerabilities vary from learner to learner, however, the kind of support and motivation that child receives becomes embedded in a child's mind, so what a

child learns in that time and who he/she learns from, essentially becomes their support structure. For learners with autism, namely, parents and educators, this makes up the microsystem of the ecological theory, namely, the immediate environment (Ettetal & Mahoney, 2017). Once learners with autism gained support and assistance from their parents and educators, or someone familiar to them, they felt more confident in their surroundings and would attempt tasks more willingly, thus eliminating anxiety which seems to be their major shortfall. In this context of learners with autism, similar contentions apply. Hence, in stating that the autistic learners' major shortfall is anxiety, parents, and educators, through their experiences and observations gauge their triggers and abate these stressors by substituting such activities according to the learners 'likes.' Based on this finding in this study, it can be argued that learners with autism are unique and diverse. Moreover, parents who have made these initial observations, need to inform educators about their child's triggers to avoid the child experiencing undue stress and anxiety. This must be done early in the year, so this information is captured in the child's Individualised Education Plans (IEP's). In this way, the parent and the educator are aware of the child's triggers. Each child on the spectrum has their triggers as each one is unique thus, their needs vary. Hence, parents and educators need continued engagement and a shared understanding of the learners diagnosed with autism to mitigate their challenges, which is the mesosystem of the ecological theory. Consequently, the individual education plan is the cornerstone for the education of all learners with autism who needs support, guidance, and assistance, as it is aimed to meet the individual needs and goals of all learners on the spectrum of autism (Redhorn, 2017).

9.3.1.2 Learner's inability to express themselves

The inability to express themselves encompassed the social and educational vulnerabilities experienced by learners diagnosed with autism. Learners with autism are challenged by the most essential human behaviors, namely socialisation, and communication, hence they cannot easily communicate their ideas and feelings, let aside understand someone else's emotions (National Research Council, 2019). The study revealed that learners diagnosed

with autism range on the lower spectrum of autism, thus they have poor cognitive abilities, which inhibits their ability to express themselves as typically developing learners. Furthermore, many learners in this study are speechless or have minimal speech which becomes more fraught and complicated for such learners, thus leading to severe behavioral problems (National Autistic Society, 2020; Weber, 2013; Aude, 2017). This is further supported by participants in this study.

Mrs John (E) from School F stated, “... *they tend to cry and withdraw as they unable to communicate exactly what they are feeling and what they are going through...*”

Mrs Joseph (E) from School D mentioned, “...*delayed speech in some of our learners...as much as I incorporate pictures and sign language in lessons...some of them have minimal speech but it is not clear and some of them don't have any speech so when I engage in my lessons with them, they somewhat seem disinterested...sometimes they get frustrated...they have meltdowns.*”

The data revealed that learners' inability to express themselves exacerbates their behavioral issues that affect their daily living. Some of them get “*frustrated*” resulting in “*meltdowns*”, whilst some become reclusive and “*withdrawn*”. This is in direct relation to the perspectives of other researchers, especially that of Happe (2015). Furthermore, research shows that many learners with autism, not only lack the ability to express themselves, but they also lack the ability to understand someone else's emotions and feelings (Hale, 2018). This can be quite stressful for learners diagnosed with autism (National Autistic Society, 2020). The social theory of autism indicates that learners with autism are not intrinsically motivated to interact with other people and express themselves freely as typically developing learners as they lack the theory of mind, which is elusive to learners with autism, especially those in this study, namely learners on the lower spectrum of autism (Stavropoulos, 2018). Furthermore, the theory of mind is usually mastered in a typical learner before five years old, however, this study illuminated the cognitive development of autistic learners which is not per the typical age developments. The study

comprised learners from 6 years to 15 years old, among which, many did not have speech or had minimal speech, and those that had some speech were echolalic. The theory of mind is associated with the humanistic theory as learners with autism cannot intuit facial expressions, tone of voice, and body language of others, thus inhibiting them from expressing themselves appropriately which can lead to bullying and ridicule (Rudy, 2019).

Mr Krishna (E) from School A mentioned, “...*he has no speech and has difficulty in social and emotional skills. He also has difficulty in maintaining relationships and making friends. He likes being alone...*”

Miss Chetty (E) from School D expressed, “...*some of them can't really gel... so they can't make friends...also they won't freely go and make friends...*”

The inability to express themselves, namely not having “*speech*” which inhibits them to “*gel*” with each other exacerbates their social interaction and communication. This impedes them from maintaining friendships and relationships, namely, they may not be able to understand social rules and etiquettes (Belek, 2018, p. 7). The ability to express one’s self is interposed with social interaction and communication which is an important human development, however, when one does not acquire that trait, then they can become stifled and frustrated (Omar, 2018). Some learners had difficulty grasping concepts in class and could not express that challenge, such as Miss Chetty (E) from School D who stated, “...*they get frustrated and overwhelmed when they can't grasp concepts...*”

The study disclosed that learners diagnosed with autism, especially learners on the lower spectrum of autism experience frustration, ridicule, bullying, and behavioral issues, which was largely due to the inability to express themselves. Thus, the findings thereof illustrated that participants intervened by using multi-modal communications, such as pictures, gestures, and sign language to enhance their communication. Hence, through the lens of social constructivism, underpinned by the main concepts of scaffolding and ZPD framework, it can be argued that participants used a variety of strategies to shape the

environment of learners diagnosed with autism to improve learners' communication. It can therefore be concluded that knowledge is not absorbed but constructed and is undertaken collaboratively. Consequently, there are various ways of learning and people learn differently, which are supported by researchers (Weber, 2013).

9.3.1.3 Variation of responses were based on the situation and vulnerabilities experienced by learners diagnosed with autism

Participants mentioned that the responses by learners diagnosed with autism vary in that, some would become aggressive, some non-verbal, and some withdrawn. Each ASD learner is diverse and thus displays different responses in different situations. Jackson (2015) states that each ASD learner is unique and has their own set of challenges and demands. Moreover, autism is a spectrum disorder, hence learners experience varying degrees of difficulties including social, verbal, communication, and repetitive behaviors (Mayo Clinic, 2018). Learners in this study ranged on the lower spectrum of disorders thus, they were largely dependent on support, guidance, and assistance unlike typically developing learners or learners on the higher spectrum of disorders (Saggers, 2016). These learners experienced difficulties socialising and communicating as many of them were non-verbal or had minimal speech, and as such, they would get frustrated. Some of them become aggressive resulting in meltdowns, whilst some of them would just withdraw and become aloof (Autism Speaks, 2018). In the process, some of them would get bullied, teased and in some instances even assaulted (Jackson, 2015).

The social theory of ASD includes unusual behaviors such as being aloof, stilted, rude, aggressive, forthright, shy, thoughtless, and immature which often result in people on the autism spectrum having difficulty forming meaningful conversations, long-term friendships, and relationships (National Institution for Deafness & other Communication Disorders - NIDCD, 2018). The situativity theory interrelates with this study as learners diagnosed with autism experience challenges based on their personal situations and locations, and their environment is paramount as it allows for the acquisition of knowledge,

thinking, and learning (Smets and Struyven, 2018). Hence, the environmental stimuli can aggravate their vulnerabilities, thus the experience of their situation has varying degrees of responses. Participants indicated some of the responses of the vulnerabilities experienced by learners in different situations.

Mrs Singh (E) from School B mentioned, “...*the other learners will pick on her and laugh at her in class because she would babble or make funny sounds... so she would sometimes withdraw and sometimes she would run out of the class... scream and cry... hit me when I go to fetch her...*”

Mrs Khan (P) from School D stated, “*At home, she is quiet, sits in her room the entire day. She would sometimes rest or sometimes she would do some of her schoolwork depending on her mood, but she does not trouble us or cry. When she wants something, she would ask for it or sometimes points to what she wants as she doesn't have too much speech...*”

At school, these learners diagnosed with ASD had to engage with educators and other learners, some that were also autistic and others with varying disabilities. The classroom was sometimes overwhelming for the child diagnosed with autism, she would “*babble or make funny sounds*” to self-regulate as she was anxious being around all the other learners. The mere fact of going to an unknown place and meeting unfamiliar people was somewhat overwhelming, and they fear the unpredictable which increases the level of anxiety (Gaigg, et al., 2018). Furthermore, not having speech, makes everything more fraught and complicated compounding their communication attributes (National Autistic Society, 2020). The study concluded that change of routine also affects their psychological well-being, often leading to high anxiety.

At home, the response was somewhat different as the autistic children are familiar with their environment, thus giving them more stability and a sense of acceptance (National Autistic Society, 2017). In this study, these learners diagnosed with autism range on the lower spectrum of autism. This variant of autism impedes their cognitive functioning, thus

it becomes onerous to rationalise and cope in different situations and environments (Autism Speaks, 2018). Their theory of mind inhibits their adaptations to situations and environments (Mayo Clinic, 2018). Situativity theory delineates that learners with autism prefer stability and consistency in their environment and activities, which is the perspective of the National Health Sciences (2018). Summerson-Wright (2016) affirmed that their psychological input is affected by their neuro-developmental disorder, that their thinking is rigid limiting their ability to adapt to a variety of situations.

The findings of the variation of their responses to the situation and their vulnerabilities were largely related to their triggers. The study suggests a need to work around what the learners' likes and dislikes are, to engage them in an enriched environment that is familiar to them, thus eliminating any activation of their triggers or stressors (Davis, 2018). Suffice to say that changing and adapting to the environment subtly also mitigated behavioral episodes, thus avoiding situations that trigger challenging behaviors. This meant detecting early signs of behavioral episodes to calm situations by using a variety of approaches and strategies to eliminate behavioral outbursts (Brittingham, 2019, p. 43). The study concluded that the use of a variety of approaches and strategies reduced their frustration and anxiety to an extent of creating an understanding to learners diagnosed with autism which is in line with the National Health Services (2015).

9.3.1.4 Stimulation and exposure enhance the cognitive development

The first research question was aimed at finding out the vulnerabilities experienced by learners with autism. The findings thereof were broadly categorised as personal, social, and educational vulnerabilities. This was in direct relation to the characteristics of autism which include social, communication, restrictive, and stereotypic behavior that causes significant impairments in social, occupational, and other areas of functioning, including cognitive functioning and developmental disorders (Mayo Clinic, 2014). Hence, the kind of stimulation and exposure that the learners with autism received determined the

development of the learner. This entailed the different approaches and strategies that participants utilised to effectively support, guide, and assist learners diagnosed with autism. According to Beth Saggars (2016), every learner on the spectrum of autism is unique and has unique challenges, thus the strategies that participants utilised were individualised and allowed learners to develop their cognitive abilities. Once their cognitive abilities are enhanced, this will also stimulate their social and personal development. This is in direct relation to Feuerstein's mediated learning and social constructivism, as their abilities are enhanced through the process of scaffolding. They do not develop or operate in isolation as each enables and mutually supports learning and development (Allen & Kelly, 2015; Weeks, 2000).

The study shows the inter-relationship between the three domains, namely, cognitive, social, and personal or emotional domains that enhances the learning and development of learners diagnosed with autism, through Mediated Learning Experience (MLE) and environmental stimuli (cf. Chapter Three, p. 29). Mediated learning experience (MLE) in this study is an interactional process in which parents, teachers, therapists, or peers, interpose themselves between a set of stimuli and the learner, and modify the stimuli for developing the child diagnosed with autism spectrum disorder. The modifiability of the stimuli makes provision for learners' individual programmes thus, it is tailored to meet their individual goals which are what Jackson (2015) alludes to. The environmental stimuli, namely school, and home entail the microcosm of the macrocosm, namely community, of learning and development. As mentioned, learners in this study are low functioning, some of them were non-verbal, some minimal speech and are often seen as being aloof and withdrawn. Some participants asserted:

Mrs Joseph (E) from School D mentioned, “... *I have noticed delayed speech in some of our learners whilst some of them have minimal speech, but their speech is not clear, so I incorporate pictures and sign language in lessons, however, they cooperate when they want to...*”

Participants emphatically stated the vulnerabilities that the autistic learners experienced, albeit challenging, each of them utilised different strategies to ensure that they were able to accomplish the learners' goals, some used pictures, and sign language, and some used therapeutic interventions to ameliorate communication and cognitive development in learners diagnosed with autism. Participants agreed that the kind of stimulation that learners diagnosed with autism received was largely dependent on the kind of strategies and interventions that they were exposed to.

Learners in this study ranged on the lower spectrum of disorders with comorbidity of mental retardation and researchers concurred that it is not a diagnostic feature, however, it can be comorbid of autism (Vipul, 2015). Hence, Isaacs (2014) argues that “... *there is no such thing as 'pure' autism*”, he believes that autism is “like a *'fruit salad,'* made up of a range of underlying conditions which together, like a blended fruit salad, give the appearance of a single condition.” He further stated that, autism, a neurological disorder, seldom occurs alone and tends to overshadow the presence of other difficulties. Thus, the manifestations of intellectual retardation, are social, communicative, and imaginative difficulty (Vipul, 2015).

Mrs Pillay (E) from School C elaborated, “...*learners are non-verbal and its quite a challenge to get through to them...also besides them being non-verbal, they also have cognitive challenges which make it more difficult for them to communicate ...*”

Miss Cele (P) from School F expressed, “...*my son doesn't walk and talk...he also doesn't look at me when I talk to him...when he wants something, he just points to it...*”

Participants' empirical evidence revealed the vulnerabilities that learners with autism experience. As much as educators used a variety of strategies to stimulate learner's cognitive learning and development, they required further interventions, such as speech and occupational therapy as learners experienced speech and communication difficulties and social developments. Hence, the stimulation of learners diagnosed with autism spectrum

disorder, entailed a multidisciplinary team to develop their cognitive abilities and to mitigate such vulnerabilities (Bachrach, 2016).

According to Autism Speaks (2018), speech therapy can address a wide range of communication problems for learners with autism as they experience major problems with speech and non-verbal communication, thus impeding their conversational skills which include eye contact and gestures.

Essentially an occupational therapist also plays a pivotal role in developing autistic learners' cognitive and social skills, including handwriting, fine motor, and daily living skills besides assessing and targeting the child's sensory processing disorders to help keep them calmer and more focused (Laurie, 2018). However, whilst some learners were fortunate to receive speech and occupational therapy, some schools were in decadence. Some participants ruminated their concerns.

Mr Krishna (E) from School A mentioned, “...we are grossly understaffed thus we are in dire need of staffing at our school as our learners with ASD require high levels of support... we don't have any therapists at our school, it is so difficult to work with these learners with ASD without the speech and occupational therapists...”

Mrs Moses (E) from School D affirmed, “...we don't have sufficient personnel to achieve our outcomes with our ASD and high care learners...”

Whilst some learners in this study received various exposure and stimulation from the necessary personnel, some learners were unable to receive the same kind of exposure and stimulation. Some parents were able to afford private therapy, so those learners were able to develop their cognitive abilities. According to Lebeer (2017), Feuerstein's theory of structural cognitive modifiability contends that a child's cognitive functioning can be significantly modified through mediated learning interventions, thus by transforming and organising the stimuli experienced in the environment and by incorporating people that the

learner is directly involved with, namely parent, educator, therapist. The study concluded that the kind of exposure and stimulation, including therapy, can significantly modify the cognitive functioning of learners with developmental disorders, such as autism spectrum disorder.

There seems to be a direct link between Feuerstein's theory of structural cognitive modifiability and Bronfenbrenner's ecological theory. Hence, the microsystem of the ecological theory of autism entails most of the assessments made on a specific child's cognitive and social development, and on specific behavioral patterns based on support networks of its family, school, therapists, and parents (Ettetal & Mahoney, 2017). The study revealed that despite the challenges that some schools experienced, parents and educators persevered to stimulate and expose learners to multi-modal communications by utilising a variety of strategies and interventions to develop learners' cognitive abilities. Furthermore, for learners diagnosed with autism to develop holistically, they need to also have the necessary support, guidance, and assistance from stakeholders (Hale, 2018). The study further concluded that the stimulation, exposure, and interventions need to start at an early age, so learners diagnosed with autism begin to adapt and develop their self traits, needs, and abilities which is the internal system, with an attempt to change the child, namely, to develop their cognitive abilities, and to facilitate his/her adjustment to the external environment.

9.3.2 Challenges experienced by educators and parents

9.3.2.1 Educator's lack of adequate knowledge, support, and resources to teach learners diagnosed with autism

According to Mader (2017), the need for educators who have both the knowledge and the ability to teach learners with special educational needs is more critical today than ever before, as the identification of learners with disabilities have grown, more especially autism spectrum disorder, as it is the fastest-growing developmental disorder globally (Autism

Speaks, 2018). According to the Centre for Disease Control and Prevention (2018), the latest autism prevalence statistics this year saw an increase of autism from 1 in 68 just two years ago to 1 in 59. This is a 15% increase, which is astronomical, thus this would have increased further in 2020 (cf. Chapter Two, p. 12)

Given the above statistics that have been growing at an alarming rate, it is a grave concern that educators lack knowledge on autism spectrum disorder. They also lack support and resources, thus impacting on them meeting their desired outcomes and objectives in teaching learners diagnosed with an autism spectrum disorder. The duty of an educator in this study ought to have expert knowledge in the subject area or field to demonstrate competence in classroom instruction and to adapt instruction/support to learners' differences in development, learning styles, strengths, and needs besides all other duties outlined in the Personnel Administrative Measures (PAM) (Department of Basic Education, 2016). However, this is not possible if the prospectus of higher institutions lack provision for special educational needs like it was offered in the past. Suffice to say that in the past educators had specialised education and training to teach the different cohort of learners which deemed successful and achieved the desired results.

According to the data in this study, 83% of educators had a Degree in Education, but only 28% of educators had Specialised Education in addition to their initial Degree in Education. The educators that had a basic degree had just one module on Inclusive education in their studies, which was very generalised, thus it was not enough to equip educators to teach learners with disabilities and autism spectrum disorder. This analysis showed that a handful of educators had relevant qualifications to understand and teach this cohort of learners diagnosed with autism spectrum disorder. Furthermore, that posed challenges in classroom delivery, however, despite the qualifications they still endeavor to navigate and teach learners diagnosed with autism by acquiring some knowledge on ASD through independent reading and attending occasional workshops initiated by the Department of Education. These were some of the educators' testaments:

Mrs Joseph (E) from School D stated, “...*I didn't know anything about autism when I was placed in the autism unit...didn't want to be in the unit...wanted to leave until an ASD learner made a direct contact with me which touched me...I then attended workshops and started reading about autism on my own to learn...but each learner is so diverse so I'm still learning...*”

Mrs Moses (E) from School D mentioned, “... *I was put in a class where I had autistic learners but I didn't know anything about autism...no experience, knowledge, and not much support from School Management teams and Department officials...educators don't have experience ...although some educators have double degrees, their courses did not have much information about autism and even if there are any workshops from the department...it's very narrowed down...so you have to make meaning and sense all by yourself...so it becomes trial and error when we are teaching these learners with ASD...*”

This study concludes that educators are not trained on how to teach learners with autism and do not get the necessary support from stakeholders, namely Institutional-level Support Teams (ILST) and District Based Support Teams (DBST). This is in direct contradiction to Education White Paper 6: Special Education (Department of Basic Education, 2001) and the Screening, Identification, Assessment, and Support (SIAS) document (Department of Basic Education, 2001a, p, 21). Pivotal to Inclusive Education is the provision of support for all learners and educators (Department of Basic Education, 2007), specifically to educators in this study, who require the necessary support, knowledge, and resources in teaching learners with autism. Educators in this study vociferously proclaimed their lack of support, as they did not have sufficient knowledge and training in teaching learners diagnosed with autism spectrum disorder. Like the microsystem of Bronfenbrenner's theory stipulates that the support networks that are central to learners diagnosed with autism, educators also need to be supported to form a firm foundation for learners. Support systems also include having the necessary resources. Hence, the study realised that some educators showed great enthusiasm, however, they felt stifled.

Mrs Moses (E) from School D mentioned, “...there are so many lovely resources on the internet, but the school cannot afford to buy it...it’s so heartbreaking when you know you want to do so much for these learners with ASD but you are so restricted...when we ask to purchase these resources, we are told there are no finances... yet I know there is a budget from the department for the learners with ASD...”

Classroom practice is fragmented as the educators lack the resource to meet learners’ individual needs and demands. The Department of Education provides a budget for learners with ASD and learners requiring high levels of support to optimise teaching and learning (Department of Education, 2019). However, this is not effectively monitored leaving educators in a quandary as they are often turned down by their respective principals stating there are no funds to purchase relevant resources for the learners diagnosed with autism, which is contrary to the department’s allocation. In addition to material and financial resources, educators also bear the brunt of human resource issues.

Mr Krishna (E) from School A stated, “...we are grossly understaffed thus we are in dire need of staffing at our school as our learners with ASD require high levels of support...we don’t have speech, and occupational therapists. We also don’t have nurses to administer medication, we have to administer the medication, and very often parents don’t update us on their children’s medication, so we don’t know if we are administering the correct dosage...”

The lack of staffing, including class assistants, therapists, and nurses, impacts the teaching and learning of learners diagnosed with autism, due to the moratorium being placed on these posts ((Department of Basic Education, HRM Circular No. 41 of 2012). Again, this is in direct contradiction with White Paper 6 and SIAS as these policies advocates having adequate staffing to support teaching and learning and to have district-based structures and teams, as well as therapists and other professionals to offer support to schools and educators (Department of Basic Education, 2007). The study revealed several inadequacies to attain

the desired goals of teaching learners diagnosed with autism, namely, lack of educators' knowledge on ASD, support, and resources.

9.3.2.2 No prescribed curriculum for learners diagnosed with autism

The second research question aimed to identify the challenges experienced by educators. Educators experience challenges with the curriculum apart from the myriad of challenges mentioned above. It is essential for learners diagnosed with autism to access a broad and relevant curriculum to equip them socially and academically for inclusion as members of their community, and as individuals with autism spectrum disorders (ASDs) experience the world in a fundamentally different and diverse way than those who do not have autism (Peters, 2015, p. 26). Hammond (2019) therefore attests, that educators must be able to adapt their teaching in a non-intuitive manner to effectively engage learners with autism. Thus, the repertoire of knowledge and skills required by educators to successfully attain learners' needs and demands can be somewhat complicated by the multiplicity of ASD-specific teaching approaches and strategies. The study found that there is no prescribed curriculum to teach learners diagnosed with autism. Participants' perceptions and experiences of the current curriculum impacts the teaching and learning of learners with ASD as the curriculum does not assist and guide educators to attain the individual goals of learners diagnosed with autism.

According to the Department of Basic Education (2015, p. 34), the implementation of the White Paper 6 aimed to eradicate some of the challenges as there were concerns about the standard of curriculum delivery in special schools. One of the concerns was that special schools were somewhat like daycare centers, as educators did not have a proper curriculum programme to cascade to learners. Hence, as part of the Department of Basic Education's concerted effort, a turn-around strategy for special schools was to provide training to educators and allocate subject advisors to monitor the curriculum delivery at special schools however, the same support was not afforded to special schools. There was very little to no monitoring at schools, thus leaving the special schools with no curriculum for

learners with ASD *per se* (Department of Basic Education, 2015). This concurred with participants' sentiments, leaving educators in limbo, as the curriculum directs the classroom delivery, thus giving impetus to programmes for teaching learners diagnosed with autism. Educators then endeavored to formulate a curriculum based on some of the activities from the CAPS (Curriculum Assessment Policy Statement) curriculum, besides engaging with a variety of other resources but mainly relied on their experiential curriculum. This integration of the curriculum guided educators to formulate a programme to suit learners' individual abilities, needs, and demands. Siggers (2016), concurs that educators are expected to tailor the curriculum to meet the individual needs and demands of learners with autism, however, this could not be realised in its entity as educators do not have a prescribed curriculum to work from. The study highlighted that there is no prescribed curriculum for learners with special educational needs (LSEN) and specific to this study, ASD. Educators utilise the Curriculum and Assessment Policy Statement (CAPS) as mentioned above, by adapting it to suit learners' individual needs, however CAPS is plagued by challenges. The findings of this study are supported by the literature that explains that White Paper 6 aimed to eradicate some of the challenges as there was serious concern about the standard of curriculum delivery in special schools, however, the implementation of White Paper 6 thereof failed (Department of Basic Education, 2015, p. 35).

The National Curriculum and Assessment Policy Statement (CAPS) was implemented in 2011, which is a single, comprehensive, and concise policy document introduced by the Department of Basic Education for all the subjects listed in the National Curriculum Statement for Grades R – 12, that provides detailed guidance for educators on what they should teach and how to assess learners (Department of Basic Education, 2010). This being the only gazetted document from the Department of Education, it is not a curriculum that can be used across the spectrum as learners in this study, namely learners diagnosed with autism require high levels of support. These learners are not graded according to departmental grades but according to their individual abilities and ages. CAPS curriculum is content-based and rigid, thus there is no allowance for flexibility. Hence, this is not the ideal and cannot be used in its entirety, therefore educators use it as one of the resources

eg., SANASE CAPS and Skills programme for learners with severe intellectual barriers to learning (SANASE, 2011), CLASSIC (Computerised Learners Assessment Syllabi System for the Intellectually Challenged, DCAPS (Differentiated Curriculum Assessment Policy Statement). These are used in addition to other documents, to extract areas that can be utilised to develop learners cognitive, social, emotional and personal well-being to meet their individual learning outcomes, including the inculcation of independence and responsible behavior so that they can fit into society as typically developing learners.

Mrs Moses (E) from School D indicated that she, *“was placed in a class where I had autistic learners, but I didn’t know anything about autism. I did not have any experience and we don’t have a curriculum for ASD. We are left to plan a curriculum using a variety of resources to ensure that we meet learners’ individual outcomes.”*

Some educators were able to plan a curriculum specific to the learners’ needs and abilities based on their experiences, whilst some educators, like Mrs Moses had no experience teaching learners with autism, thus impacting the teaching and learning of learners diagnosed with autism. The findings concluded that not having a prescribed curriculum, which gives impetus to educators regarding their preparation for teaching and learning, becomes a contributing factor to some of the vulnerabilities experienced by learners diagnosed with autism. It can be argued that many resources can be utilised to tailor a programme for learners with autism, however, the study suggests a need for a proper curriculum that can be gazetted to teach learners diagnosed with autism spectrum disorder.

9.3.2.3 Overcrowded classrooms impact on classroom delivery

The data revealed that most participants were disappointed, whilst some were frustrated due to the overcrowded classrooms. Educators were fully aware of the post provisioning norms and weighting norms for learners with disabilities, and specific to this study learners diagnosed with autism that require additional support from various categories of personnel, namely educators, therapists, and class assistants ((Department of Basic Education, 2016).

The weighting norm for learners with autism is six, thus in essence one learner diagnosed with autism will add up to six learners in the mainstream school. Some participants alluded to having 9 learners in their autistic unit. When calculated according to the weighting norms, it totals to an average of 54 learners per unit, whilst some educators indicated they had their autistic learners integrated into other classes, thus those were classes with learners that have multiple disabilities. Those integrated classes have 15-16 learners per class. In some schools, there was an average of 3-4 learners diagnosed with autism, apart from the other learners with multiple disabilities per unit.

Mrs Singh (E) from School B mentioned, “...it’s so hard to do my class programmes...she wants my attention all the time and wants to cling onto me, but I have so many other learners to see to in my class...” This participant struggled to accommodate this autistic learner as she had a comorbid ADHD apart from having 2 other autistic learners and learners with multiple disabilities. Hence, it would have been more appropriate for these learners diagnosed with autism to be in a smaller class and perhaps in an autistic unit. The findings of this study are supported by literature that elucidated that learners diagnosed with autism have diverse educational needs and having them integrated with other learners with multiple disabilities can leave learners with autism overawed and educators overwhelmed (Cervera, 2017).

According to literature, the implementation of White Paper 6 was not upheld as the Department of Education envisioned, hence, the provisions of adequate staffing had a ripple effect on the overcrowded classrooms (Department of Basic Education, 2001). Classrooms became overcrowded due to the moratorium placed on the employment of support staff, namely therapists and class assistants (Department of Basic Education, HRM Circular No. 41 of 2012). In some instances, it was based on an incorrect calculation of post provisioning norms on the employment of educators at schools (Department of Basic Education, HRM Circular No. 57 of 2017). Hence, participants argue that the reality of White Paper 6 in special schools is plagued by challenges, including overcrowded classrooms, thus they are unable to give learners with autism the individual support that they require (Saggers, 2016).

This was affirmed by Mrs Singh (E) from School B who explained that the support that learners with autism require are sometimes impossible and they get lost in the class programmes due to the overcrowding. Mr Krishna (E) from School A mentioned, “*our autistic learners get bullied and teased...it’s difficult to see to so many learners in the class...*” An overcrowded class is usually noisy, thus they become victims of bullying. Furthermore, the noise exacerbates their sensory issues, which impairs their concentration and exhibit behavioral issues.

The findings of this study are supported by literature that explains the noise in the classroom can lead to behavior issues, such as a sensory overload which is a breakdown in the child’s self-confidence, and diminish their willingness to learn (Cervera, 2017), besides being ostracised and bullied (National Health Institute, 2018). The study found that overcrowded classrooms impact on teaching and learning of learners with ASD, thus it is more appropriate to work with smaller classes with a lower learner to teacher ratio. Hence, this study is in line with what was found by Weber (2013) and is evident that smaller classes will be more productive, and educators will be able to cater to learners with ASD’ individual needs and demands.

9.3.2.4 Lack of awareness by parents of learners with autism spectrum disorder

The lack of awareness by parents with learners diagnosed with ASD impacts learners learning and development. Early diagnosis will involve early interventions, guidance, and support (O’Connor, et al., 2015, p. 7). However, this is only possible if parents were aware of autism before or when a child is born so that the necessary interventions, namely, therapy could be undertaken at an early stage. Some parents find out quite late, i.e., when a child is about 3-4 years or even later. At this stage, parents take their child to the doctor when they notice speech delays, poor eye contact, unusual behaviors, only to find out the child has autism spectrum disorder.

Mr Naicker (P) from School A explained that his son, “... *had temper tantrums at supermarkets ...he would scream and block his ears...*” He further elaborated, “...*he didn't like attending family functions...he would hit us and pull us around...I used to get tired with him as I did not understand what he wanted...also he was a very chubby child, I could not manage to carry him around...*”

Miss Jones (P) from School A remarked, “...*his milestones were all delayed...he didn't have speech at 4 years old so I thought he is just late and those milestones will develop... eventually I felt something was wrong... he won't look at me when I talk to him so I thought he had a hearing problem...then I took him to my doctor who sent me to a specialist...the specialist did lots of tests on him, such as hearing tests, blood tests, etc....then he told me that my child is autistic...*”

These excerpts from parents were indicative that they only discovered or learned about autism through their personal experiences and observations as each of them experienced different kinds of issues with their child. Whilst these parents made observations about their children's behavior and delayed speech, another parent blamed herself for not spending enough time with her child to notice certain traits were unusual. Mrs Paul (P) from School E mentioned, “...*I blame myself...if only I spent quality time with him...I would have realised and noticed that my child is different from other children...*” As much as this parent blamed herself and the previous parent, Miss Jones, was hopeful about her child reaching milestones at a later stage, they were unaware of autism or rather had no knowledge of autism for them to know or realise that unusual behaviors and speech delays, is associated with autism. Furthermore, there is no medical test, like a blood test, to indicate that a child has autism, during pregnancy or after a child is born (Centre for Disease Control and Prevention, 2020). The situativity theory alludes to the kind of situation that each parent experiences in a specific environment for them to become aware of their child's condition (Smets and Struyven, 2018). Parents notice these symptoms, some early and some late, then will engage a doctor to make the diagnosis, and eventually, the necessary interventions, therapies, etc. are instituted, which ties up with the macrosystem of Bronfenbrenner's

ecological theory (Ettetal and Mahoney, 2017). The findings of the awareness of parents of learners diagnosed with autism are that all parents need to have knowledge and awareness of autism before a child is born so that they will be aware of the signs and symptoms to make early detections and observations. Early detections and observations mean early interventions thus, the child starts learning and developing his/her abilities early which impacts on their behavior, communication, and social interaction (Webb and Jones, 2017, p. 5).

9.3.3 Mitigation of vulnerabilities experienced by learners diagnosed with autism

9.3.3.1 Parents and educators have similar understandings of learners diagnosed with autism

The study revealed that parents and educators of learners diagnosed with autism, have a similar understanding of autism. They share similar understandings of ASD based on their experiences and observations. They perceived ASD as a condition, like other conditions and disabilities, that can be controlled by medication and ‘a one size fits all’ approach. However, there are no drugs currently that have been approved to address these core symptoms as a ‘quick-fix’ (Carmosino, 2018). Hence, with time and experience, they observed that this was somewhat different from the usual they were dealing with, as each one was unique with their strengths, weaknesses, abilities, and challenges (Jackson, 2015). These are some responses from participants.

Mrs Ngwane (E) from School F explained, “*...it was hard to understand learners with ASD.... they are so unique... I did not know anything about autism but when I had autistic learners placed in my class then I started reading about autism and attending workshops...*”

Miss Jones (P) from School A mentioned, “*my son didn’t have speech at 4 years old...he also won’t look at me when I used to talk to him...he didn’t like certain clothes...he wasn’t*

like normal children...his eating habits were different...ate unusual things, like sand, lotion ...we couldn't take him to malls and supermarkets...he would scream and cry...so I took him to the doctor, after running a series of tests, he diagnosed him as autistic...I really thought he would get better as he grows up... I learned a lot about autism through my experiences and reading."

Participants' responses were such that their acquisition of knowledge and understanding of ASD was based on their experiences, observations, and reading and in some instances attending workshops. As much as participants endeavoured to do their best for learners with autism, the findings of the understanding of autism were limited, thus creating lots of confusion, disappointment, and frustration. Some parents have high expectations of their children to attain certain goals. Furthermore, educators who undertake their macro-planning for learners also have certain expectations however, learners with autism having low cognitive abilities and other comorbid conditions, experience difficulty to attain the desired goals and objectives. This interpretative-phenomenological theory in this qualitative study illuminated the participants' descriptions of their limited understanding that alluded to the impact it has on the learning and development of learners with autism spectrum disorder. Consequently, if there is limited understanding from participants, then learners with ASD will not receive suitable treatment and interventions which can mitigate their vulnerabilities (Matteson, 2015).

The kind of support, guidance, and assistance autistic learners receive from parents and educators will largely depend on their understanding of autism, as it forms the microsystem or the immediate environment that provides the major support and basic structure for the social life of learners (Bronfenbrenner, 2018). This ecological theory has a direct influence on human development and on the people, who interrelate with learners diagnosed with autism (Smith, 2016). Anwar, et al., (2018) concurs that participants' ability to recognise the signs and symptoms of autism and respond appropriately is of paramount importance in aiming to provide the best healthcare and education to autistic individuals.

The findings of the study also found that participants in this study experienced difficulties communicating with autistic learners and understanding their facial cues and behavioral outbursts. Likewise, children on the spectrum may have trouble understanding or communicating their needs to educators and peers and they may experience difficulty understanding classroom directions and instructions, along with subtle vocal and facial cues of educators and their parents (Autism Fact Sheet, 2016). The findings of this study highlighted that this is a two-way process, namely for learners with autism to understand the people they interact with, especially the participants in this study, those people (participants) also need to understand them, hence, participants need to see the world through the lens of the learners diagnosed with autism. Considering that learners in this study range on the lower spectrum of autism, “Classic Autism,” it is more challenging for them to make meaning and understand the world around them, hence the participants’ understanding of ASD can make a positive impact on the lives to mitigate some of their vulnerabilities.

9.3.3.2 Intervention strategies varied with educators and parents

Although parents had a similar understanding of autism, namely learned through observation and experience, their strategies varied accordingly. Parents’ observations were made from the birth of their child, and they had a personal interest in their child’s well-being, however, educators’ observations and experiences started on the day the child transitioned to school and their interest in the child with autism was more duty-bound. Consequently, parents and educators wanted to enhance the child’s learning and development. However, their intervention strategies differed based on their observations and experiences and according to the child’s needs and abilities (Saggers, 2016). Furthermore, the learners in the study ranged in the lower trajectory of autism. They experienced intrinsic and extrinsic vulnerabilities that were more pronounced which required parents and educators to use more effort and use a variety of strategies based on learners’ individual needs.

This section implied that there were significant teaching strategies that participants used taking into account their diverse needs and abilities. These strategies will be reflected in a table form disclosing the vulnerabilities that learners experience and the variety of adaptive and maladaptive strategies that parents and educators utilised to influence learner potential. The findings of the first and second themes had a significant influence on the third and final theme - the mitigation of the vulnerabilities. The third theme demonstrates that teaching learners diagnosed with autism requires a collaborative approach.

Vulnerabilities experienced by learners diagnosed with autism	Parent's intervention strategies to mitigate these vulnerabilities	Educators' intervention strategies to mitigate these vulnerabilities
Transitioning	Pacifier, something as a source of comfort, e.g., spoon	Sensory rooms, deep pressure stimulation (DPS), brushing the hair, social stories, pictures
Differing Sensory Needs	Pacifier, motion (going for a drive), therapy	Earmuffs, something crunchy to eat (self-regulation), deep pressure, e.g., weighted blanket, bear hug, jumping on a trampoline (self-regulation), AstroTurf (color, texture-adaptation of the environment), therapy
Communication and Routine	Sign language, learner's own means of communication, namely, nodding, writing on hand, sounds	AACs (Augmentative and Alternative Communication), visual schedules (pictures), sign language
Socialisation	Perseverance, motivation, and role-playing,	Social stories, pictures
Toileting problems	Perseverance and motivation	Pictures, social stories
Problems with eating	Substituted crunchy foods	The subtle introduction of nutritious foods
Bullying, Victimization, Stigmatisation	Attended parent support groups	Mediation, reinforcement of school rules

Table 9.1: Intervention strategies

Table 9.1 illustrates a concise list of strategies that parents, and educators utilised according to their observations and experiences which they deemed ‘workable’ for learners diagnosed with autism. The situativity theory of the theoretical framework in this study demonstrates the ‘workable’ strategies according to an individual’s situation in a given environment (Smets and Struyven, 2018). In addition, each learner on the spectrum is unique, therefore strategies cannot be used *carte blanche* (Jackson, 2015). The environmental changes that learners with autism are placed in, ultimately affect their situation making them somewhat distorted and that often results in agitation and displaced aggression (Autism Speaks, 2018). However, the study revealed the adaptation of the environment besides a host of other strategies (sign language, sensory rooms, pacifiers) and artifacts (AACs, pictures, visual schedules), assisted in mitigating their vulnerabilities. These artifacts namely, AACs, pictures, and visual cues (PECS) have become an effective model of teaching and communication among educators and researchers (McCoy, 2019 & Bourique, et al., 2016). The findings of this study concur with that of SIAS (Department of Basic Education, 2001). Once learners were screened and identified as having challenges, they were provided with the necessary assistance and support by their immediate support structures, namely parents and educators, that being the microsystem of Bronfenbrenner’s ecological theory (2017). However, the study also revealed that some learners lacked the intervention of therapists who play a significant role in teaching and learning of learners diagnosed with autism, which coincides with the perspectives of Wilmot (2018). The holistic development of learners diagnosed with autism requires a collaborative approach with parents, educators, therapists, SMTs, to mitigate their vulnerabilities (Department of Basic Education-Inclusive Education, 2001 and cf. Chapter 4- Ecological theory). Furthermore, despite the study disclosing the lack of resources (material, financial, human), educators were able to organise, mobilise and improvise resources to meet the needs of learners, thus making them resourceful agents of change (Frost, 2017).

The study further concluded that despite educators not having a prescribed curriculum *per se* for learners diagnosed with autism, as mentioned above, they still endeavor to formulate intervention strategies that best suit and work for learners’ diverse needs based on their

experiential curriculum. This included educators' providing the necessary support, adapting resources and activities to learners diagnosed with autism. Such provisions and improvisations of resources and activities by educators concur with the Inclusive Education Policy Framework (2001). Some of the educators attend workshops, read material related to autism, and most importantly use their experiential curriculum to assist, guide, and support learners with autism. However, it can be argued that although educators were aware of their core duties and responsibilities, there is a need for ongoing support, guidance, and training in teaching learners diagnosed with autism (White Paper 6, 2001).

9.4 CONCLUSION

In attempting to mitigate the multiple vulnerabilities experienced by learners diagnosed with autism, an analysis of the interviews and observations emerged that inhibited the proper teaching and learning of learners diagnosed with autism. These findings included intrinsic and extrinsic factors that act as barriers to the teaching and learning of learners diagnosed with autism. These findings were also related to the three core research questions which were categorised and discussed accordingly.

The following important conclusions emerged from this chapter:

- Personal vulnerabilities of learners diagnosed with autism experienced by educators and parents were similar in nature but varied in expression. These included their transitions from place to place and from activity to activity, sensory issues, and personal care which was ultimately due to their high anxiety levels.
- The variation of responses by learners with autism was based on situations and their vulnerabilities which were invariably caused by their triggers.
- Parents and educators have a similar understanding of learners diagnosed with autism. This was obtained through their experiences, observations, and reading.

- The kind of stimulation and exposure including interventions and services that learners diagnosed with autism receive will enhance their cognitive, physical, social, and emotional well-being and abilities.
- Educators lack the necessary knowledge, support, and resources to teach learners diagnosed with autism.
- There is no prescribed curriculum that can assist and guide educators to teach learners diagnosed with autism. This impacts the teaching and learning of learners diagnosed with autism.
- The overcrowded classrooms affect the service delivery in classrooms. This acts as a barrier to learners, especially the noise and distractions in class and it also impacts on teaching and learning of learners diagnosed with autism. Therefore, it is more appropriate to work with smaller classes with a lower learner to teacher ratio.
- The lack of awareness by parents of learners diagnosed with autism.
- Intervention strategies varied with educators and parents.

Chapter Ten will provide a summary of the findings, a theoretical analysis of findings, implications, recommendations, limitations, and the conclusion of the study.

CHAPTER TEN - SUMMARY OF FINDINGS, RECOMMENDATIONS, LIMITATIONS AND CONCLUSION OF THE STUDY

*“Behavior is communication. Change the environment and behaviors will
change.”*

Lana David (2020)

10.1 INTRODUCTION

The words of Ignacio Estrada (2019), “If a child can’t learn the way we teach, maybe we should teach the way they learn,” is the gist of what this study is about. The perspectives of parents and educators in this study suggested that every ASD child is unique, thus a ‘one size fits all’ approach cannot be used for learners with ASD. Every learner on the spectrum has their own needs and demands, thus they need to be approached accordingly. Furthermore, each learner diagnosed with ASD has their own strengths and weaknesses.

The aim of this research is to mitigate the multiple vulnerabilities experienced by learners diagnosed with autism. Findings from this research confirm that there are three broad categories of vulnerabilities experienced by learners diagnosed with autism, namely, personal, social, and educational vulnerabilities. The research findings presented these vulnerabilities as intrinsic and extrinsic to these learners. Hence, this chapter will unfold with an overview of the research, followed by a summary of the findings in relation to the research questions.

This study aims to mitigate the vulnerabilities experienced by learners diagnosed with autism. Finally, the implications and the limitations of the study will be discussed, followed by the recommendations and the conclusion.

10.2 OVERVIEW OF THE RESEARCH PROCESS

As an educator in the special needs profession, I encounter learners diagnosed with ASD daily. However, from my personal observation, I have realised that the admission of learners diagnosed with autism has been increasing at an alarming rate. Although the Education White Paper 6 (Department of Basic Education, 2001) which is aimed at building an inclusive education and training system is in place, learners are still being denied admissions at mainstream schools. As a result, special needs schools are becoming swamped with learners with disabilities, especially autism.

These learners do not only have ‘Classic Autism’ but also have comorbidities, such as ADHD (Attention Deficit Hyperactivity Disorder), epilepsy, etc., besides low cognitive abilities. Furthermore, many parents that bring their learners in for admissions are either in denial or they lack understanding and knowledge of autism spectrum disorder. Some have financial problems, and have not taken their child for therapeutic intervention. Parents also indicated that they are single parents and experience financial challenges. They also explained that they do not have any family support, neither do they have support from their partners as they are either divorced or their partners have absconded. Hence, this is perhaps another reason that learners do not receive the relevant interventions early in their lives, as the parents experience financial and emotional challenges. This inevitably affects the learning and development of learners diagnosed with autism. Learners exhibit anxious behaviour, they scream and cry, they throw lots of tantrums. I always wondered what vulnerabilities affect these learners for them to display unusual behaviour.

The second reason for my interest in this study has been fostered by the way educators react towards learners diagnosed with autism. Some educators reprimand the learner for their unusual behavior. Some get frustrated as learners do not communicate, and do not understand the core curriculum like typically developing learners. I often wondered what was different about these learners with autism in relation to other learners at special needs schools. Lastly, after making the necessary observations, I looked at possible intervention

strategies that can assist these parents and educators in mitigating the challenges that learners with autism experience.

My study highlights parents and educators' observations, experiences, and perspectives to get an in-depth understanding of learners diagnosed with autism. Furthermore, parents and educators provide the necessary support, guidance, and assistance to the learners with autism, thus this forms the immediate network of support in the child's environment, which forms the microsystem of Bronfenbrenner's ecological theory (Smets and Struyven, 2018) and Feuerstein's mediated learning environment (MLE) (Tzuriel, 2020). The study also illuminates the unusual behaviors experienced by learners diagnosed with autism in certain situations. As explained in the situativity theory it is environmental changes that one is placed in that exacerbates their behaviors (Autism Speaks, 2018). The literature review highlighted the unusual behaviors, social and communication challenges that learners with autism experience. The data also revealed that learners diagnosed with autism experience personal, social, and educational vulnerabilities. Emerging from the literature review and the data, the researcher was able to identify theoretical frameworks that would give an understanding of the vulnerabilities that learners with autism experience and the mitigation thereof. Furthermore, the methodology included semi-structured interviews and observations. This triangulation gave a crystallised view on the vulnerabilities experienced by learners diagnosed with autism.

10.3 SUMMARY OF FINDINGS

This section summarises and delineates the understanding of autism and the vulnerabilities experienced by learners diagnosed with autism. Learners with disabilities in the apartheid regime were segregated, discriminated, and stigmatised, hence, learners were denied schooling, however only the privileged and white learners were admitted in special educational schools (Msimang, 2018). Subsequently, the Salamanca Statement was released in 1994 (post-apartheid), which made a systemic change and rectified the inequalities (UNESCO, 1994). The Education White Paper 6 was adopted in 2001, which

made provision for the inclusion of all learners with barriers to learners that required additional support. Learners were categorised and placed accordingly (Department of Education, 2001). Today we have special needs schools that cater for the various categories of learners to provide proper guidance, support, and assistance to learners with barriers to learning, namely autism spectrum disorder.

The study comprised of learners diagnosed with autism that ranged on the lower spectrum of autism, thus have low cognitive abilities, hence, some were placed in autistic units at their schools and some learners were integrated in classes with learners having multiple disabilities. The results of the study revealed that these learners experienced a plethora of intrinsic and extrinsic challenges, namely, personal, social, and educational vulnerabilities. The study also concluded that participants' understanding, and early intervention could have mitigated some of the vulnerabilities that learners with autism experience. To amplify the understanding of autism, early diagnosis will involve early interventions, guidance, and necessary support (O'Connor, et al., 2015, p. 7).

The following is a concise summary of findings, namely mitigating the multiple vulnerabilities experienced by learners diagnosed with autism:

10.3.1 Participants understanding and knowledge of autism and the impact it has on learners diagnosed with autism

In the past, ASD was not as prevalent as it is currently (Centre for Disease Control and Prevention, 2018). The condition has become the fastest growing condition globally, thus the understanding and knowledge is of paramount importance (Autism Speaks, 2018). The study revealed that participants understanding was very limited, which was acquired through their experiences and exposure with learners diagnosed with autism. Participants in the study included parents and educators, hence, their knowledge and understanding varied accordingly. Due to the fact that there are no medical tests, like a blood test, that proves a prognosis for a child with autism (Centre for Disease Control and Prevention,

2018), it is difficult for parents to ascertain the child's condition. Some parents realised that something was amiss with their child when they encountered unusual behaviours and delays with milestones, whilst some of their children reached their milestones at their normal developmental period, however, their behavior was somewhat odd, which was picked up later when the child started schooling. In some instances, educators observed the child being socially withdrawn, aloof and displayed self-stimulatory behaviors. These are characteristics of ASD (Jackson, 2015). Had there been awareness of autism at the time of a mother being pregnant or after confinement, the parents would have had some understanding of autism spectrum disorder, which would have determined the kind of intervention for the child. Hence, early diagnosis impacts the learning and development of learners with ASD.

Similarly, educators understanding was very limited, and this was acquired through their experience and exposure when working with learners diagnosed with autism. Hence, educators expressed grave concern as there was insufficient information about ASD when they undertook their studies. Courses were restructured, and just one section on inclusive education did not suffice for them to acquire knowledge on autism. Furthermore, according to SIAS (Screening, Identification, Assessment and Support) (Department of Education, 2014), which is a policy framework that is underpinned by Education White Paper 6 (Department of Education, 2001), there should be on-going training, support, and guidance to educators, however this was not evident. This was further compounded by the fact that there is no prescribed curriculum to teach learners diagnosed with autism, as well as limited resources, and overcrowded classrooms. Thus, educators had to acquire knowledge and understanding through their own personal experience and exposure when teaching learners diagnosed with autism. This meant that teachers were using a trial and error approach to teaching learners with ASD.

Participant's knowledge and understanding of ASD is pivotal for early interactions and interventions to enhance learners learning and development. Theorists believe that "if one does not believe in or value the knowledge and understanding of any aspect, one is less

likely to act on it,” (Vivian, et al., 2016, p. 3), in essence the study concedes that the knowledge and understanding that could have been acquired early by parents, could have determined the kind of interventions and treatments that the child would have received, as it forms the foundation of a child’s learning and development. The kind of interventions that learners diagnosed with autism acquire early would impact their future and moderate their daily life, namely, speech therapy, occupational therapy, play therapy among a host of other therapeutic interventions (Autism Speaks, 2018). Early interventions can also help a child with autism to learn and develop critical social, communication, functional and behavioral skills (Mayo Clinic, 2018). Learners diagnosed with ASD present with persistent deficits of social communication and interactions, and restricted or repetitive patterns of behavior in early childhood (Saggers, 2016). Thus, these characteristics needed to be observed and carefully understood early in a child’s life to eradicate some of the challenges that they experience later in their lives. Communication is the most essential part of interaction, however it can be a two-way problem, as learners on the spectrum have communication challenges, but for other people, especially participants in this study, they need to do more in order to accept the differences in the way learners with autism express themselves (Denworth, 2018). Therefore, for one to do more, they need to have a knowledge base and understanding of ASD to mitigate some of the vulnerabilities that learners with autism experience.

Participants are the mediators of the learning and development of children diagnosed with autism, hence there is direct interaction between the participants and children with autism (Alony, et al., 2018, p. 64). However, mediated learning can only be possible if one understands the child’s condition *per se*, including their abilities, needs and demands (Brittingham, 2019). It was quite evident from the findings that participants lacked the necessary knowledge and understanding on autism spectrum disorder, thus this impacted on the learners’ early interventions and treatments thereof. Suffice to say despite the limited knowledge and understanding that participants possessed, they still endeavoured to assist, guide and support learners diagnosed with autism through their experiences and exposure. However, although each learner’s needs and demands varied, participants still persevered

in their quest. Autism awareness campaigns and motivational talks can provide participants with a better understanding of autism spectrum disorder.

10.3.2 Personal vulnerabilities and its impact on learners diagnosed with autism

The findings highlight that the intrinsic vulnerabilities were categorised into three broad categories, namely personal, social, and educational vulnerabilities. This was further subdivided into various challenges experience by learners diagnosed with autism, namely, transition, sensory issues, personal care, social and emotional challenges, and educational challenges including communication. These vulnerabilities were attributed to the inherent nature in these learners but was largely related to their high anxiety levels and triggers. A recent study found that the prevalence of anxiety in learners diagnosed with autism have varied widely from 22%- 84%, this has soared over the past decade (Vasa & Mazurek, 2015). This information concurred with this study as learners ranged on the lower spectrum of autism, hence, their anxiety is more prominent, thus manifesting in behavioral disorders, namely aggression, and self-injurious behaviors resulting in meltdowns.

The study also revealed that despite some learners being on medication to keep them calm they still displayed behavioral issues. Shriver (2019) states that currently there is no medication that can cure ASD or any of its associated symptoms, however, the FDA (Food and Drug Association) has approved certain drugs, namely Risperidone among others, that can assist in managing certain behaviors, namely aggression, anxiety, and self-injurious behavior, but with behavior therapy. Hence, therapy plays a pivotal role in the learning and development of learners diagnosed with autism as it allows for the adaptation of behavior and learning by conditioning (DeFilippis & Wagner, 2016). Thus, medication cannot be used in isolation, it needs to be used in conjunction with therapeutic intervention.

Learners with autism spectrum disorder, more especially learners that range on the lower spectrum of autism, feel 'trapped' in their bodies and minds as they are unable to express their emotions, besides the inability to communicate their thoughts (National Institution for

Deafness & other Communication Disorders, 2018). The study revealed that the inability to express their ideas and feelings, difficulty understanding other emotions and facial expressions and loud sounds, especially the noise levels in class and at malls, becomes more frustrating and stressful for them to cope. Moreover, some learners were non-verbal and some with limited speech, thus this became challenging to communicate their needs, which leads to stigmatisation, victimisation, and bullying. These were significant challenges that learners diagnosed with autism experience, however, if these challenges were dealt with at an early age, namely through interventions, coping of such challenges could be improved.

Results of this study also indicate that some schools did not have therapists, hence, there is an absolute need for all schools to have therapists as the study indicates that although some learners are on medication, they need regular therapy. This does not only include play therapy but also speech and occupational therapy to develop their social communication abilities. The provision of educators, paraeducators and therapists can influence learners emotional and educational well-being which can have a positive effect on their overall performance. Douglas and Gerde (2019. p. 32) states early intervention, educational support and therapy are essential to help learners diagnosed with autism to develop their social communication skills for their success at school and in life. Shange in a newspaper article (Article, 07 May 2018, *The Mercury*) reported on the loss of a 10 year old autistic child due to communication deficits and anxiety, and highlighted how early intervention programmes and therapy can assist in ensuring the safety of autistic learners. An awareness and understanding of autism can assist in early therapeutic intervention to overcome the intrinsic challenges experience by learners diagnosed with autism for them to live a 'so-called' normal life and to fit into society.

10.3.3 Extrinsic vulnerabilities and its impact on learners diagnosed with autism

The findings in this study highlight that the extrinsic vulnerabilities have a direct bearing on learners diagnosed with autism. It may not be inherent in nature, but they are largely

responsible for the learning and development for learners with autism. Neurotypical individuals may have the ability to navigate through extrinsic challenges, however learners diagnosed with autism, lack the ability to block out certain hinderances or improvise on certain aspects. Hence, cognisance needs to be taken to adjust the areas that act as a barrier to learners in this study. There are a multitude of extrinsic vulnerabilities that participants identified that act as barriers to learners diagnosed with autism that requires intervention.

No prescribed curriculum – There is an urgent need for the Department of Education to develop a prescribed curriculum for educators to use as a baseline to compile a curriculum for learners diagnosed with autism. This prescribed curriculum will give impetus to educators for a structured learning and development programme for learners. Hence, it is the educators’ prerogative to utilise a variety of resources to tailor a programme according to learners needs and abilities, however, there is a need for a gazetted curriculum for learners diagnosed with autism and learners with special needs *per se*, like the CAPS is a gazetted document by which educators are guided to structure programmes for learners in mainstream schools. Majoko (2017) concurs that educators that are providing educational support to learners diagnosed with autism, have to be suitably qualified so that they have the patience and tolerance to deal with the challenges that learners experience.

Overcrowded classrooms – The overcrowded classrooms hamper the concentration and attention of learners with autism. Overcrowded classrooms mean lack of space and noise intensity which are barriers to learners diagnosed with autism. This also exacerbates their sensory issues, and it gives the ‘so-called’ bullies an opportunity to ridicule and victimise learners with autism. Learners in the study range on the lower spectrum of autism, thus they require individual attention, as they have low cognitive abilities besides some requiring high levels of support, namely personal care. According to Saggars (2016), learners with ASD require individualised attention to meet their daily demands and needs, however, the overcrowding in classrooms impacts on meeting educational outcomes (Saggars, 2016). Learners need to be placed in autistic units with smaller numbers in class, namely 6-8

learners with at least 1-2 paraeducators to assist, guide and support learners under the guidance and supervision of the educator.

Resources – Resources are the primary tools to facilitate the process of learning (Savery, 2015). This can be costly to cater for the individual needs and demands of learners diagnosed with autism. Hence, without the appropriate resources, schools will be in decadence (Mupa & Chinooneka, 2015, p. 125). The study alluded to three major shortfalls in respect to resources, namely financial, material, and human resources at various schools. Some schools had insufficient human resources, hence without sufficient personnel, schools are unable to function effectively. The microsystem of the ecological theory requires a multidisciplinary team to provide and expose learners diagnosed with autism to a stimulating and fulfilling environment, namely educators, therapists, class assistants. However, according to the Department of Basic Education, HRM Circular No. 41 of 2012, there is a moratorium on support staff posts which is impacting negatively on the learning and development of learners diagnosed with autism. The stimulation and learning and development of learners diagnosed with autism also requires proper material resources, namely equipment, charts, AACs and finances for the purchase of specialised equipment for autistic learners requiring high levels of support. According to SNES (Special Needs Education Service, 2019) special schools are allocated R200 000 from the KwaZulu-Natal Department of Education for learners requiring high levels of support, and ASD falls within this category. Learners in this study have clinically significant delays in personal, social and communication skills, thus resources play a critical role in their learning and development.

Bullying, victimisation, and stigmatisation – Bullying, victimisation and stigmatisation are becoming more and more prevalent at schools and in society. Learners with disabilities, especially learners with autism become ‘soft- targets’ for perpetrators, as these learners are socially withdrawn and aloof (Hebron, 2015). When one is withdrawn and prefers being alone, that does not give another the right to interfere, victimise or ridicule them. Sometimes alone time is all they need to re-collect their thoughts. According to Cervera

(2017), this happens because of sensory overload, namely, the noise intensity in class, among others can lead an autistic child to leave the class and he/she would want to be alone. The study revealed that due to the overcrowded classrooms, many autistic learners get bullied and victimised, which often goes unnoticed. Furthermore, participants namely parents, observed that society also victimises and stigmatises learners diagnosed with autism, and learners are labelled as being naughty or ill-mannered. The need for awareness, understanding and knowledge on ASD will eradicate the bullying, victimisation and stigmatisation at schools and in society.

10.3.4 Intervention strategies that mitigate the vulnerabilities experienced by learners diagnosed with autism

The aim of the intervention strategies in the study is to ensure that learners diagnosed with autism can fit into society as any other ‘normal’ learner. Strategies in this study were those interventions that participants engaged ‘first-hand,’ which they found assisted them in mitigating some of the core characteristics of autism, namely speech delays, communication, socialisation, among others. Subsequent to a diagnosis of learners, participants engaged in speech and occupational therapy for their learners with autism. Whilst some parents were able to afford private therapy, some schools were fragmented, as there were no therapists at their school. However, educators acting as *in-loco parentis*, worked to the best of their ability to ensure that learners could acquire the fundamentals of learning and development by utilising the following intervention strategies whereby they are able to process abstract concepts into something more concrete and tangible to enhance their understanding.

Pictures – The Picture Exchange Communication (PECs), seemed to be the most effective means of communication in this study, as most learners were either non-verbal or pre-verbal, hence, they were more visual learners. According to Schlosser and Wendt (2019), using pictures is an alternative to speech which can assist learners in their activities of daily living (ADLs). Pictures were used to break down activities so that learners can

conceptualise and concretise the tasks on hand. Furthermore, pictures are used to prepare learners for transitions from place to place and from activity to activity (Raising Children, 2020). The association of pictures to objects assist and guide learners in identification, learning and development which gives learners confidence and zest.

Sign language – Sign language is an alternative means of communication besides being an effective means of communication. Parents and educators need to be in sync to impart the same signs to learners at school and at home. The promotion of sign language to enhance communication also builds learners confidence in their ability to communicate. According to Perez (2016), sign language can also help learners diagnosed with autism to acquire speech and develop communication as it complements each other. Whilst some learners with autism are visual learners, others are auditory learners, and they may learn through spoken language and music (Shriver, 2016). This is purely based on the fact that each learner on the spectrum is different, hence, they learn in different ways, namely ways that they deem comfortable for them.

Social stories – The social stories comprised of pictures and short, simple, descriptive words and sentences that is broken down to get a message to the child with autism. It helps to mold a specific behavior, especially socially acceptable behaviors, thus it enables understanding of what is acceptable or not. Furthermore, participants in this study looked at areas for development, namely toileting which seemed to be a personal vulnerability to many. This social story is read several times until the skill is mastered. Hence, the pictures in the story also assist learners visually so they can mimic the steps. Besides the story being read to them repeatedly, it also helps develop speech and communication. Such reinforcements motivate the behaviour. According to Lofland (2015), social stories are an easy and effective way of teaching appropriate behaviors to learners with autism, by using written or visual cues that can help them navigate through the struggles of social situations.

Schedules – Schedules are visual cues that assist learners to realise their daily activities and events. Participants in this study use visual cues, namely picture schedules on the class

timetable to show learners their daily activities and develop their routine. These are used among other schedules, namely object schedules, photo schedules, color coded picture schedules, to create independency in learners with autism. Furthermore, these schedules assist in building comprehension, which is another channel for learning and development (Long, 2016, p. 12). Moreover, Long (2016, p. 3) adds that schedules are easily adaptable and is designed according to the learners' individual needs and may vary in length and form.

Photos – Photos are a great way of putting a name to a face, thus learners can learn who they associate with at school and at home. This makes learners feel safe and gives them a sense of security. Hume (2018) contends that photos of people they need to associate with, eliminates anxiety in learners diagnosed with autism as they have a fear of being with someone unfamiliar to them.

10.4 THEORETICAL ANALYSIS OF FINDINGS

This research study was underscored by an interpretivist phenomenological paradigm, which is informed by people, namely parents and educators, that directly relate with learners that are not only diagnosed with autism but range on the lower spectrum of autism, hence have low cognitive abilities and are unable to express their concerns. By using the interpretivist phenomenological paradigm, I was able to understand the people who were first-hand engaged with learners diagnosed with autism. They had first-hand experience and observations of the vulnerabilities that learners diagnosed with autism experience. The analysis of data had to be carried out by using two theories, namely situativity theory and social constructivism. The situativity theory was largely based on the situation that learners diagnosed with autism was placed in, that exacerbated their vulnerabilities as they are super sensitive to any change (Autism Speaks, 2018). The social construction was related to developing communication and interaction in learners diagnosed with autism. As Fraser-Thill (2020) pointed out according to Feuerstein's theory of Mediated Learning Experience (MLE), learning and development is about developing and modifying the learners'

cognitive abilities by means of scaffolding and the zone of proximal development (ZPD). These are important tools to construct and develop communication, language, and interaction. Hence, the cognitive abilities of learners with autism can be modified through the adaptations made in the environmental stimuli (Tzuriel, 2020). In essence, learning and development cannot take place in isolation, but through the medium, support, guidance, and assistance of all those that are directly related to learners diagnosed with autism.

The microsystem of the ecological theory advocates the need for support networks of family, school, therapists to assist in the mitigation of the vulnerabilities that learners diagnosed with autism experience (Smets & Struyven, 2018). As school is the microcosm of society, the need for engagement from various sectors is pivotal in the learning and development of learners with autism (cf. Chapter 4- Ecological theory). Communication and language development are socially constructed; hence, these are the key issues of learners with autism, thus this needs to be humanly constructed. This essentially means that learners with autism experience issues with social communication and interaction which often results in behavioral problems or meltdowns, thus affecting their social strata and therefore need assistance, guidance, and support from various stakeholders.

Furthermore, if a learner with autism has difficulty expressing his needs or thoughts, that may manifest in behavioral problems. It is therefore essential for educators, parents, and therapists to be involved in the holistic development of the learners diagnosed with autism by utilising a variety of strategies, therapies and by adapting the environment. According to Sagers (2016), providing an appropriate learning environment can be as central to a learner's success as any teaching strategy, therapy, or educational tool. Without such interventions, it is pointless in addressing the intrinsic and extrinsic vulnerabilities experienced by learners diagnosed with autism. It is my fervent hope that this study can enhance the awareness of ASD and highlight the importance of the involvement of various key stakeholders for the holistic development of learners with autism to mitigate their vulnerabilities. The next section will encompass some of the key implications in this study and the recommendations thereof.

10.5 IMPLICATIONS AND RECOMMENDATIONS OF THE STUDY

This section addresses some of the implications that hindered the learning and development of learners diagnosed with autism. The study made me realise and understand that these implications have contributed to the vulnerabilities of learners diagnosed with autism. Based on these findings, the study makes the following recommendations.

10.5.1 Creation of awareness of Autism Spectrum Disorder

Given the fact that the study illuminated that parents and educators lack or have limited understanding and knowledge of autism spectrum disorder, there is a need for Health and educational sectors to facilitate regular motivational talks, campaigns, and events to highlight and create awareness and understanding of autism spectrum disorder. This awareness and understanding will assist in an early diagnosis of autism with proper interventions. Thus, this can mitigate some of the vulnerabilities experienced by learners with autism. The study also revealed that ASD is the fastest growing epidemic globally (World Health Organisation, 2019), hence the awareness is critical for not only the participants in the study but also society at large, to eradicate the stigmatisation and victimisation which is largely related to misconception about autism.

10.5.2 Devise a Curriculum for Autism Spectrum Disorder

The Department of Education has only one gazetted document for all learners, namely mainstream learners, and learners with special needs. This document is the CAPS document which is broad and does not allow for flexibility in meeting the needs of learners with ASD. Educators in this study utilised the CAPS curriculum but unfortunately were compelled to utilise a variety of other sources to create a programme that is suitable for learners according to their needs and abilities. It is therefore critical for the Department of Education to devise a curriculum specific for ASD so that this document can be utilised to create a programme that is not only suitable for learners with autism but also will allow for

flexibilities according to learners' individual needs and abilities. Hence, this will give educators impetus in their programming and confidence in imparting the relevant knowledge to learners diagnosed with autism.

10.5.3 Training of educators

According to Education White Paper 6 (Department of Education, 2001) and the Screening, Identification, Assessment and Support (SIAS) document (Department of Basic Education, 2001a), educators ought to have ongoing support, training, and guidance in teaching learners with special needs, especially autism. However, this has not materialise to date, thus debilitating the teaching and learning process. Furthermore, the study revealed that educators lacked adequate knowledge and training at tertiary level, thus exacerbating their situation in teaching learners diagnosed with autism. It is therefore imperative that the Department of Education institutes a revised plan of action to train educators to fulfil learners' optimal potential, thus reaching their desired goals and outcomes.

10.5.4 Resources

Resources are tools that are indispensable to teaching and learning, namely human, material, and financial resources. The study revealed that the lack of resources hampered the teaching and learning process. Some schools lacked staff, namely therapists, class assistants, etc., due to a moratorium being placed on the provision of support staff at schools (HRM Circular No. 41 of 2012). Meanwhile, other schools lacked material and financial resources due to poor monitoring and management of funds provided by the Department of Education. Learners require high levels of support and without the relevant resources, learners will be disadvantaged to acquire the necessary and appropriate support, guidance, and therapeutic interventions (Autism Speaks, 2018). Hence, the need to mobilise inclusive education funding to meet the milestones laid out in Education White Paper 6, and invest existing resources, namely human, material, and financial resources, more effectively to enhance quality specialised education for learners diagnosed with autism.

10.5.5 Classrooms for Autism Spectrum Disorder

Having an inclusive ASD class allows for strategic seating, lighting, planning, and individual workspace, among others. The study revealed that some schools had their autistic learners integrated into other classes with large numbers, and as a result these learners experience sensory overloads and meltdowns, besides bullying and victimisation. According to Saggars (2016), learners diagnosed with autism function better within a predictable environment as structuring the learning strategies will be specific to those lot of learners, namely, posting individual rules in a visually accessible location, developing a visual schedule for daily activities, providing visual warnings before transitions, having a specific place where materials will be stored and introducing unfamiliar tasks in a familiar setting. This approach is ideal for the foundation years of learners with autism, hence, as the learner progresses into his/her teenage years, they can be integrated with other learners with smaller class numbers to promote social communication and interactions. There is a need for all special needs schools to have autistic units to accomplish the core objectives and goals for learners diagnosed with autism, especially in the foundation years.

10.6 SIGNIFICANCE OF THE STUDY

The purpose of the study was to explore the multiple vulnerabilities experienced by learners diagnosed with autism. In addition, the study also looked at some of the contributing challenges and the mitigation of those vulnerabilities. From my observation, participants really struggled to understand autism. They assumed a ‘one size fits all’ approach, however, over time working with them, they realised that each child was so different from the next. Furthermore, what worked for one did not really work for another. This necessitated epistemological assumptions, engagement of various stakeholders and policies, which was beyond my control as a researcher. Through my findings in this study, and after my interactions with participants, it became evident that participants lacked knowledge and understanding on ASD which impacted the early diagnosis and interventions for learners. The study highlights some of the key constructs of social communication and personal

developments by addressing some of the vulnerabilities pertaining to the core characteristics of autism.

One of the core mandates from the Department of Education was to ensure that all learners with disabilities, namely autism, must be placed at an appropriate school to acquire the necessary skills and knowledge, and most importantly to move away from the past inadequacies and inequalities (UNESCO, 1994). The study indicated that learners ranged on the lower spectrum of autism, thus had low cognitive abilities, which necessitated special needs schools. According to the Department of Education (2001), White Paper 6 aimed to train, guide and assist educators to teach learners diagnosed with autism. In essence, educators need to assist, guide, and teach learners to overcome some of their barriers to learning and vulnerabilities, namely personal, social, and educational. Incidentally, some of these vulnerabilities were exacerbated by the Department of Education's inadequacies, namely, training of educators, curriculum, and resources. Consequently, the study revealed some of the contradictions of the Department of Education that had a direct impact on learners diagnosed with autism. The findings of the research show that communication and therapy, compliments each other, hence the therapies and intervention strategies enhance learning and development (Perez, 2016).

Most prominently the study highlights the need for awareness (health and educational) campaigns to address these vulnerabilities, such as personal, social, and educational. Whilst that may be so, the significance of the study lies in the use of some of the theoretical frameworks to delineate and understand experiences of parents and educators, their impact on the learning and development and some of the challenges that contributed to the interventions.

10.7 CONTRIBUTION TO THE STUDY

Autism Spectrum Disorder (ASD) is a fast-growing neurodevelopmental disorder which affects 1 in every 59 learners currently, 1 in every 34 boys and 1 in every 151 girls

respectively. Learners experience great difficulty with social interaction, communication and behavior disorders. Furthermore, learners in this study range on the lower spectrum of autism, hence their challenges are somewhat more pronounced. The study revealed that these learners experience personal, social, and educational vulnerabilities with some being intrinsic and some being extrinsic barriers to learning and development. Many parents find it rather challenging to cope and understand their child's developmental delays. Hence, they live on false hope that the child will develop later than typically developing children. Thus, their lack of understanding and knowledge of ASD inhibits the child from acquiring the necessary early interventions and therapies.

Moreover, educators find it challenging to cope with learners diagnosed with autism in their classes, as each learner's needs and abilities are so individualized and unique that they require teaching approaches and methodologies to be tailored to suit learners' respective needs. Educators go out feverishly to gain necessary knowledge and skills in teaching learners diagnosed with autism as they lack the necessary knowledge and understanding in teaching such learners. Education White Paper 6 aimed to support, guide, assist and train educators to teach learners diagnosed with autism, however this failed in the process due to a variety of factors, namely human resources, financial resources, material resources, overcrowded classrooms and no prescribed curriculum. This study aims to rectify those inadequacies by addressing the individual needs and demands of learners diagnosed with autism. Ultimately the study aims to mitigate the multiple vulnerabilities experienced by learners diagnosed with autism by;

- (i) Providing a variety of intervention strategies that work best for each learner according to their individual needs and demands
- (ii) To provide parents guidance and support to gain a better understanding and knowledge on autism spectrum disorder so that early signs and symptoms can be easily identified and the proper interventions can be instituted early in a child's life.
- (iii) To provide educators more insight on ASD to gain better knowledge and understanding in teaching learners diagnosed with autism

- (iv) To enlighten educational departments to influence and review policies, namely White Paper 6, so that educators can gain better knowledge and training in order to guide, support and assist learners diagnosed with autism
- (v) To enlighten Health and Education departments to create more awareness campaigns to communities and schools in relation to causes, types and interventions for autism spectrum disorder.
- (vi) Echo sentiments for the developments of a curriculum that would address the academic needs of learners diagnosed with autism

10.8 LIMITATIONS OF THE STUDY

The study was based on the perspectives of parents and educators who were in direct contact with learners diagnosed with autism. The study also attempted to extend the knowledge base of parents and educators. Whilst there was a large sample of 36 participants, one would expect instant responses and shared experiences, namely information on autism. However, the study encountered some limitations.

Informant bias – this is based on semi-structured interviews and observations with participants that lacked or had limited knowledge on autism. Moreover, the information provided could not be verified as the actual or precise information as it was based on their experiences and observations. The study was limited as learners with autism were unable to mention their vulnerabilities directly due to their communication challenges, namely low cognitive abilities and non-verbal or pre-verbal.

Participant's reluctance – participants, particularly parents were reluctant to speak about their child's vulnerabilities as they felt that they had already encountered many challenges, thus they were reluctant to subject themselves to further stigmatisation and victimisation. Some educators were also reluctant to speak as they were either frustrated or exhausted working with learners diagnosed with autism.

Participant's time – in some instances, I had to go daily to speak to participants, only to be told that they do not have the time to see me due to learners demands and needs. When they did find some time to see me, I felt that they rushed through those interviews, hence, those brief responses did not give me in-depth information that I anticipated. As much as I was empathetic, the responses limited my study.

Semi-structured interviews - although I formulated succinct questions for the interviews, some responses were very brief, namely some were one word whilst some were just one sentence, thus limiting the qualitative data. Hence, some areas of my study were not answered as I envisaged. Furthermore, some parents had cognitive challenges, thus they were very unclear or vague in articulating their challenges.

Observer bias – being an educator at a special needs school and teaching learners with autism, the observations that I made would be bias as it is very subjective, namely, it is my personal observations.

Limited literature on autism – considering autism is increasing at an alarming rate globally, one would think that there is sufficient books or literature on autism spectrum disorder. Unfortunately, there is not much current literature, and the study requires current literature, hence, I had to engage with a variety of sources such as articles and publications to corroborate my findings.

Representivity – the six special needs schools (9%) do not represent the entire Pinetown district as the district has 65 special schools that enroll learners with autism. Furthermore, with the contradictions in the study, it would have been ideal to have representation from the Department of Education, namely Special Needs Education Services (SNES). Hence, the sampling limited the study.

In identifying these limitations, I had to minimise the effects of these on my study by engaging some officials from the Department of education, especially from the SNES

department. However, future studies could perhaps engage representation from School Management Teams (SMT) of schools and representation from the Department of Education - Psychological Services/ Department. Despite these limitations, the study offered explicit insight on some of the vulnerabilities experienced by learners diagnosed with autism, which exacerbate their behavioral issues, namely, meltdowns. It also illuminated some of the intervention strategies that was successful in mitigating these vulnerabilities.

10.9 RECOMMENDATIONS FOR FUTURE RESEARCH

This study ranged in the field of educational psychology, highlighting the vulnerabilities and some of the contributing factors of the vulnerabilities experienced by learners diagnosed with autism. Considering research has highlighted that ASD is increasing at an alarming rate globally and looking at participants perspectives, the study therefore is at a cutting-edge for awareness (health and educational), training of educators and resources to meet learners needs. This can influence policies that can be implemented locally and internationally. Furthermore, it can also be used to review Education White Paper 6. Drawing from the above and the conclusions thereof, this study is significant and recommended to:

- I. Parents - to gain a better understanding and knowledge on ASD so that early signs and symptoms can be easily identified, and the proper interventions can be instituted early in a child's life.
- II. Educators - to gain better knowledge and understanding in teaching learners diagnosed with autism.
- III. Educational departments - to influence and review policies, namely White Paper 6, so that educators can gain better knowledge and training in order to guide, support and assist learners diagnosed with autism.
- IV. Health departments - to create more awareness campaigns to communities and schools in relation to causes, types and interventions for autism spectrum disorder.

This research could also serve as a base for further research in the following avenues:

1. An explorative study on how an early intervention programme, namely 2-3 years old, can eliminate some of the core vulnerabilities experienced by learners with autism, so that they can live as any other 'normal' individual.
2. A national empirical study on a multidisciplinary team meeting autistic learners needs and demands.
3. An action research on the implementation of a Curriculum for autism spectrum disorder.
4. A qualitative study on a review of Education White Paper 6 to meet learner needs.
5. An analysis of knowledge base on ASD and the impact on learners with autism.

10.10 CONCLUSION OF THE STUDY

The study aimed to gauge the various vulnerabilities and challenges that contributed to the vulnerabilities experienced by learners diagnosed with autism. The study aimed to mitigate these vulnerabilities so that learners can cope in different environments. The study highlighted that learners with autism experience personal, social, and educational vulnerabilities, that affected learners learning and development and most importantly their behavior. Despite participants having limited knowledge on autism, which was acquired experientially and through observations, they endeavored to address these vulnerabilities in a way that they felt that best worked for the learner. However, had the knowledge base and awareness been broader at an earlier stage, then that would have eliminated some of the vulnerabilities, namely. through interventions and therapies. Ricci and Lee (2016) contend that once a child with challenges acquires the necessary interventions, support, and therapy in their foundation years, it builds their self-esteem, learning and development, hence, making them more independent and responsible individuals in life.

The study also indicated that these vulnerabilities were not only intrinsically accentuated but were exacerbated by multiple extrinsic factors besides lack of knowledge and understanding, namely, educator training and support, no prescribed curriculum to teach learners with autism, overcrowded classrooms, and insufficient resources. The study also revealed some of the Department of Education's contradictions whereby some educators felt that they failed in their quest. Notwithstanding all the intrinsic and extrinsic factors that contributed to the vulnerabilities experienced by learners diagnosed with autism, participants still endeavored to mitigate these vulnerabilities based on intervention strategies that best worked for learners according to their individual needs and demands and through therapeutic interventions.

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Appendix A – Permission to conduct research – KZN DoE



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Phindile Duma

Ref.:2/4/8/1578

Mrs SD Hariparsad

[REDACTED]

[REDACTED]

Verulam

4340

Tel: 033 392 1063

Dear Mrs Hariparsad

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **“MITIGATING MULTIPLE VULNERABILITIES EXPERIENCED BY LEARNERS DIAGNOSED WITH AUTISM”**, in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 10 July 2018 to 02 January 2021.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Phindile Duma at the contact numbers below,
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

(PLEASE SEE LIST OF SCHOOLS ATTACHED)

[REDACTED]

Dr. EV Nzama
Head of Department: Education
Date: 12 July 2018



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

LIST OF SCHOOLS

1. Golden Steps School
2. S Dass School
3. Sunfield Homes School
4. AM Moola Spes Nova School
5. Tongaat Special School 6. Browns School

Appendix B – Ethical Clearance



04 April 2019

Mrs Shireen D Hariparsad (217178846)
School of Education
Edgewood Campus

Dear Mrs Hariparsad

Protocol reference number: HSS/1977/018D

Project title: Mitigating Multiple Vulnerabilities experienced by Learners diagnosed with Autism

Approval Notification – Full Committee Reviewed Protocol

With regards to your response received on 13 February 2019 to our letter of 20 December 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. **PLEASE NOTE:** Research data should be securely stored in the discipline/department for a period of 5 years.

The ethical clearance certificate is only valid for a period of 1 year from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Dr Rosemary Sibanda (Chair)

/ms

cc Supervisor: Dr Henry Muribwathoho
cc Academic Leader Research: Dr Ansurie Pillay
cc School Administrator: Ms Sheryl Jeenaarain

Humanities & Social Sciences Research Ethics Committee

Dr Rosemary Sibanda (Chair)

Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban 4000

Telephone: +27 (0) 31 260 3587/8350/4557 Facsimile: +27 (0) 31 260 4809 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohuno@ukzn.ac.za

Website: www.ukzn.ac.za



1910 - 2010
100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses: ■ Edgewood ■ Howard College ■ Medical School ■ Pietermaritzburg ■ Westville

Appendix C - Permission from Superintendent of Education



education

Department:
Education
PROVINCE OF KWAZULU-NATAL

For Attention : Shireen Hariparsad

Re : Request to conduct research at designated schools

Your letter dated 21 November 2017 bears reference:

Please be informed that your request for permission to conduct research at designated schools has been approved by my office. I would like to take this opportunity of wishing you everything of the best in your studies.



MR S.A.CHETTY
SUPERINTENDENT OF EDUCATION

DEPARTMENT OF EDUCATION - KZN
COASTAL CLUSTER - PINETOWN DISTRICT
M. AFUKUZELA GANDHI CIRCUIT
SUPERINTENDENT OF EDUCATION - WARD 14
28/11/2017
DATE
MR. S.A. CHETTY
"ERIGAN EDUCATION OUR TIME HAS COME"

28 NOVEMBER 2017

DATE

KWAZULU-NATAL DEPARTMENT OF EDUCATION
Postal Address: Private Bag 29137 • Pietermaritzburg • 3200 • Republic of South Africa
Physical Address: 247 Bayside Street • Anton Lembede Building • Pietermaritzburg • 3201
Tel: +27 33 392 1029 • Fax: +27 33 392 1212 • Email: Nonrumpumalelo.gasa@kzndoe.gov.za • Web: www.kzndoe.gov.za
Facebook: KZNDOE... Twitter: @DBE_KZN... Instagram: kzn_education... Youtube: kzn_doe

Appendix D - Informed Consent Letter for Principals

████████████████████
████████████████████
Verulam
4340

Dear Participant

INFORMED CONSENT LETTER FOR PRINCIPALS

My name is Shireen Devi Hariparsad. I am a Humanities-Education PhD candidate studying at the University of KwaZulu-Natal, Edgewood Campus, South Africa. My research topic is on Mitigating Multiple Vulnerabilities experienced by learners diagnosed with autism. White Paper 6 aims to establish an inclusive education and training system by changing attitudes, behavior, teaching methods, curricula, and environment to meet the needs of all learners. In accepting this inclusive approach, we acknowledge that the learners who are most vulnerable to barriers to learning and exclusion in South Africa are those who have historically been termed ‘learners with special education needs,’ namely, learners diagnosed with autism and all other disabilities. Their increased vulnerability has arisen largely because of the historical nature and extent of the educational support provided.

Your school has been selected as one of the six special needs schools in the Pinetown district through purposive sampling of schools. As a leader of this school, I hereby seek your permission to undertake a series of interviews with 3 educators from your school who are SACE registered and should be teaching learners with autism for at least 3 years and 3 parents with a child with autism. These interviews will take place for one month from the commencement of the interview process. The interviews will be of a conversational type, making reference to the vulnerabilities experienced by learners diagnosed with autism, learner performance of your school, and support structures that you have for such learners. The interviews will take place at a time convenient to your educators and will not disrupt their day-to-day functioning at your school.

Please note that:

- Their confidentiality is guaranteed as their inputs will not be attributed to them in person but reported only as a population member opinion.
- Each interview may take up to 45 minutes and maybe split depending on their preference.
- Any information given by them will not be used against them or your school, and the collected data will be used for this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- Their involvement is purely for academic purposes only, and there are no financial benefits involved.
- You as leader of the school have the right to withdraw from this project without any implications to your school

I can be contacted at:

Email: shireenhariparsad@yahoo.com

████████████████████

My supervisors are Prof. Labby Ramrathan and Dr Henry Muribwathoho who are located at the School of Education, Edgewood campus of the University of KwaZulu-Natal.

██

██

████████████████████

You may also contact the Research Office through:

Ms Phumelele Ximba

████████████████

██

Thank you for your contribution to this research.

PARTICIPANT DECLARATION

I..... (Full names of Leader of my school) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to my school participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

I also understand and give permission for the use of the following recording devices during the interview and data production process.

	Willing	Not willing
Audio recording		
Photographic equipment		
Video recording		

SIGNATURE OF PARTICIPANT

DATE:

.....

.....

Appendix E - Informed Consent Letter for Educators

School of Education
College of Humanities
University of KwaZulu-Natal
Edgewood Campus

Dear educator participant

INFORMED CONSENT LETTER FOR EDUCATORS

My name is Shireen Devi Hariparsad from the School of Education, University of KwaZulu-Natal, Edgewood campus. I am researching a topic in my field of work entitled ‘Mitigating Multiple Vulnerabilities experienced by learners diagnosed with autism.’

The broad focus of the research project is to explore the different vulnerabilities experienced by learners diagnosed with autism, to determine the impact of the vulnerabilities on the learners’ academic performance, to explore how these vulnerabilities can be mitigated against learners diagnosed with autism and to determine the support that the Department of Education lends to learners with ASD. You have been identified through voluntary inclusion process as a possible participant in data production process to produce some data on the objectives (stated above) of the research. The data production process would involve unstructured interviews.

Please note that:

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person but reported only as a population member opinion.
- The interview is iterative in nature and would be over a period of two weeks.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- You have a choice to participate, not participate or stop participating in the research. You will not be penalised for taking such an action.
- The research aims at obtaining information of experience of schooling.

- Your involvement is purely for academic purposes only, and there are no financial benefits involved.

I can be contacted at:

[REDACTED]
[REDACTED]

My supervisors are Prof. Labby Ramrathan and Dr Henry Muribwathoho who are located at the School of Education, Edgewood campus of the University of KwaZulu-Natal.

[REDACTED]
[REDACTED]
[REDACTED]

You may also contact the Research Office through:

Ms Phumelele Ximba

[REDACTED]
[REDACTED]

Thank you for your contribution to this research.

DECLARATION

I..... (full names of educator)
hereby confirm that I understand the contents of this document and the nature of the research
project, and I consent to my participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

I hereby consent to the interviews being audio recorded: Yes/No

SIGNATURE OF PARTICIPANT

DATE:

.....

.....

Appendix F - Informed Consent Letter for Parents (English)

School of Education
College of Humanities
University of KwaZulu-Natal
Edgewood Campus

Dear Parent of learner participant

INFORMED CONSENT LETTER FOR PARENTS

My name is Shireen Devi Hariparsad from the School of Education, University of KwaZulu-Natal, Edgewood campus. I am researching a topic in my field of work entitled ‘Mitigating Multiple Vulnerabilities experienced by learners diagnosed with autism.’

The broad focus of the research project is to explore the different vulnerabilities experienced by learners diagnosed with autism, to determine the impact of the vulnerabilities on the learners’ academic performance, to explore how these vulnerabilities can be mitigated against learners diagnosed with autism and to determine the support that the Department of Education lends to learners with ASD. You have been identified through voluntary inclusion process as a possible participant in data production process to produce some data on the objectives (stated above) of the research. The data production process would involve unstructured interviews

Please note that:

- Your child/ward’s confidentiality is guaranteed as her/his inputs will not be attributed to her/him in person but reported only as a population member opinion.
- The interview may last for about 1 hour and may be split depending on your preference.
- Any information given by your child/ward cannot be used against you or your child/ward, and the collected data will be used for purposes of this research only.
- Data will be stored in secure storage and destroyed after 5 years.
- You child/ward have a choice to participate, not participate or stop participating in the research. Your child/ward will not be penalised for taking such an action.
- The research aims at obtaining information of your child/ward’s experience of schooling.
- Your child/ward’s involvement is purely for academic purposes only, and there are no financial benefits involved.

I can be contacted at:

[Redacted]
[Redacted]

My supervisors are Prof. Labby Ramrathan and Dr Henry Muribwathoho who are located at the School of Education, Edgewood campus of the University of KwaZulu-Natal.

[Redacted]
[Redacted]
[Redacted]

You may also contact the Research Office through:

[Redacted]
[Redacted]
[Redacted]

Thank you for your contribution to this research.

DECLARATION

I..... (full names of parent/guardian) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to my child/ward participating in the research project.

I understand that my child/ward is at liberty to withdraw from the project at any time, should I so desire.

I hereby consent to the interviews being audio recorded: Yes/No

SIGNATURE OF PARENT/GUARDIAN DATE

.....

Appendix G - Informed Consent Letter for Parents (Isizulu)

School of Education
College of Humanities
University of KwaZulu-Natal
Edgewood Campus

Mzali Womfundi

INCWADI YOKUCELA IMVUME

Igama lami ngingu Shireen Devi Hariparsad ngivela eSchool of Education, e-UNyuvesithi yaKwaZulu-Natal, esikhungweni sase Edgewood. Ngenza ucwaningo ngesihloko esithi ‘Amasu okwehlisa ukuphindaphindeka zokungavikeleki okutholwa abafundi abaphila ne-Autism’.

Lolo cwaningo lugxile ekutholeni izinhlobo ezahlukene zokungavikeleki okubhekana nabafundi abatholwe ukuthi bane- Autism, ukuthola ukuthi lokhu kungavikeleki kunamthelela muni ekufundeni kwabo esikoleni, ukubheka ukuthi lokhu kungavikeleki kungaqedwa kanjani kubafundi abaphila ne- Autism nanokuthola ukuthi uluphi usizo olulethwa uMnyango Wezemfundo kubafundi abaphila ne- Autism. Ukhethiwe ukuba uzinikele ngokuthanda ekubeni yinxenye yokuqoqa ulwazi ngesihloko socwaningo esichazwe ngenhla. Ukuze kutholakale ulwazi kuzokwenziwa inthayvu engahleliwe

Qaphela lokhu:

- Ulwazi olutholakale enganeni yakho luzogcinwa luyimfihlo futhi aluzukuba namthelela endleleni yakhe yokuphila kepha luzothathwa njengombono nje otholakele .
- Inthayvu ingathatha isikhathi esingaba yihora elilodwa noma amahlandla ezikhathi ezahlukene enza ihora elilodwa ,kuya ngokuthanda kwalowo obuzwayo.
- Lonke ulwazi olutholakele enganeni yakho ngeke nanini lusetshenziselwe ukukhubaza wena mzali nama ukukhubaza ingane yakho, ulwazi luzosetshenziselwa ucwaningo kuphela.
- Ulwazi olutholakele luzovikeleka luzogcinwa endaweni ephephile luze lushatshalaliswe emva kweminyaka emihlanu.
- Ingane yakho inelungelo lokukhetha ukuba yinxenye yocwaningo noma ingabi yinxenye yocwaningo noma ukuyeka phakathi nocwaningo. Ingane yakho ngeke ijiziswe ngesinqumo esithathile.
- Inhloso yalolu cwaningo ukuthola umuzwa wengane yakho ngempilo yayo yokufunda esikole

- Ukubamba iqhaza kwengane yakho kulolu cwaningo kumayelana nokwenzeka ekufundeni isikole kuphela hhayi okunye futhi awukho umhlomulo oyimali oyotholakala.

[REDACTED]

[REDACTED]

Ungaxhumana neHovisi locwaningo kule nombolo:

[REDACTED]

Ngiyabonga ngosizo lwakho kulolu cwaningo.

ISIBOPHEZELO

**Mina..... (amagama
aphelele omzali/umbheki) ngiyaqiniseka ukuthi ngiyakuqonda konke okubhalwe
ngenhla kanye nohlobo locwaningo okukhulunywa ngalo, ngiyayinika imvume ingane
yami ukuba ibe yinxenye yalolu cwaningo.**

**Ngियाqonda ukuthi ingane yami inelungelo lokuhoxa kulolo cwaningo noma ingasiphi
isikhathi**

Ngiyavuma ukuthi kuqoshwe inthavyu: Yebo/Qha

UKUSAYINA KOMZALI/UMBHEKI

.....

USUKU

.....

Appendix H - Interview Schedule – Educators

INTERVIEW SCHEDULE - EDUCATORS

QUESTIONS TO EDUCATORS

- 1/ Describe your school environment?
- 2/ What is your understanding of learners with ASD?
- 3/ What are your experiences with learners diagnosed with autism?
- 4/ How did you identify a learner with autism?
- 5/ What was striking about the learner with autism?
- 6/ How did you manage with this learner?
- 7/ Did you engage any help from anyone?
- 8/ What vulnerabilities do learners with ASD experience in class? Why?
- 9/ What vulnerabilities do learners with ASD experience in school? Why?
- 10/ What did you do to overcome these vulnerabilities?
- 12/ How does the school provide a conducive environment for learners with ASD?
- 13/ How do you accommodate a child with ASD in your classroom?
- 14/ What challenges did you experience in accommodating this child in your class?
- 15/ Describe your support systems?

Appendix I - Interview Schedule - Parents (English & Isizulu)

INTERVIEW SCHEDULE - PARENTS

QUESTIONS TO PARENTS

- 1/ What do you know about autism?
- 2/ How did you get to know your child is autistic?
- 3/ What have you done to gain knowledge on autism?
- 4/ What vulnerabilities does your child experience at home?
- 5/ How do you cope with your child?
- 6/ Did you engage any help from anyone?
- 7/ What issues does your child experience in relation to what the school presents?
- 8/ Do you engage in your child's school programmes?
- 9/ Does your child experience 'melt-downs' at home?
- 10/ What triggers his/her 'melt-downs'?

Imibizo Kubazali

- 1/ Wazi kanjani ngalothu kukhubazeka okuthinta umqondo?
- 2/ Wazi kanjani ukuthi umntwana wakho uphila nalokhu kukhubazeka okumenza angafani nabanye abantwana?
- 3/ Yini oyenzile ukuthola ulwazingalokhu kukhubazeka okuthinta umqondo?
- 4/ Yiziphi izinto ezihlukumezayo umntwana wakho adlule kuzo ekhaya?
- 5/ Ngabe uhlangabezana kanjani ngalesisimo somntwana wakho?
- 6/ Ngabe kukhona yini oke wakwenza ukuthola usizo komunye umuntu?
- 7/ Iziphi izimo umntwana wakho aollule kuzo ezithintana nokwenziwa esikoleni?
- 8/ Uke wazihlanganisa nezinto ezenziwa umntwana wakho esikoleni?
- 9/ Ngabe umntwana wakho uke wahlangabezana nezinto ezimcasulayo ekhaya?
- 10/ Yiziphi izinto ezenza ukuthi acasuke?

Appendix J - Observation Schedule

Observation Schedule for Autism Classrooms

CLASSROOM/EDUCATOR:	_____
DATE	: _____
SUPPORT STAFF	: _____
ADMINISTRATOR/	
OBSERVOR	: _____

ENVIRONMENTAL ARRANGEMENT

1/ Room arrangement has clearly defined

2/ Visual boundaries for specific activities, allows for supervision of all students at all times; and prevents or minimizes problem behaviors.

3/ Visual supports are at the correct level of symbolic functioning, and are used to enhance predictability, facilitate transitions, and help convey expectations.

4/ Materials and furniture are age appropriate.

5/ Individual workstations are arranged left-right or top-bottom, and tell how much work, what work, when finished, and what's next.

6/ Materials in workstations are varied from day to day and are educationally and functionally related to learners' IEPs.

SCHEDULING, ACTIVITIES, AND INTENSITY

1/ A daily classroom schedule is posted at learners' level, is visible and appropriate for learners' level of symbolic functioning and is used throughout the day.

2/ Schedule and activities reflect appropriate distribution of curriculum for the age, level and individual needs of students in the classroom.

3/ Individual schedules are at learner level and are being used correctly.

4/ Large group transitions are infrequent and supported by environmental arrangement and scheduling.

5/ Staff ratio of at least 1 adult for every 3 students is maintained during observation.

6/ Activities are language-based, and staff encourage commenting, asking and answering questions; staff create opportunities to promote communication among learners.

7/ Learners remain actively engaged in learning opportunities throughout observation, with no more than 2 minutes down time.

8/ During 5 minutes observation, staff interact with each learner at least once to teach or promote learning.

INSTRUCTION AND INTERACTION

1/ Communication directed to students is clear and relevant, appropriate to language ability, grammatically correct and presents opportunities for dialogue (rather than being largely directive).

2/ During instruction, staff deliver instructional cues clearly, prompt as needed, and reinforce correct responses or deliver error correction as needed.

3/ All classroom staff are involved in delivering instruction, including during and out of-classroom activities (lunch, recess).

4/ All classroom staff can state IEP objectives being worked on for each learner when asked.

5/ Instruction is individualised, incorporates natural and individualised reinforcers, and encourages spontaneous use of skills in different settings.

6/ “Hands-on” contact with learners promotes independence and preserves dignity.

7/ Learners with slow rates of learning are provided intensive levels of instruction, including daily one-on-one instruction sessions.

8/ Daily communication with parents is informative, positive and nonjudgmental.

CORE CURRICULUM AREAS

1/ Staff create many opportunities for spontaneous use of communication skills, and foster communication through a variety of instructional approaches.

2/ Use of AAC devices or PECS or sign language for learners using these supports is encouraged in all situations, and learners are not denied access to their communication systems.

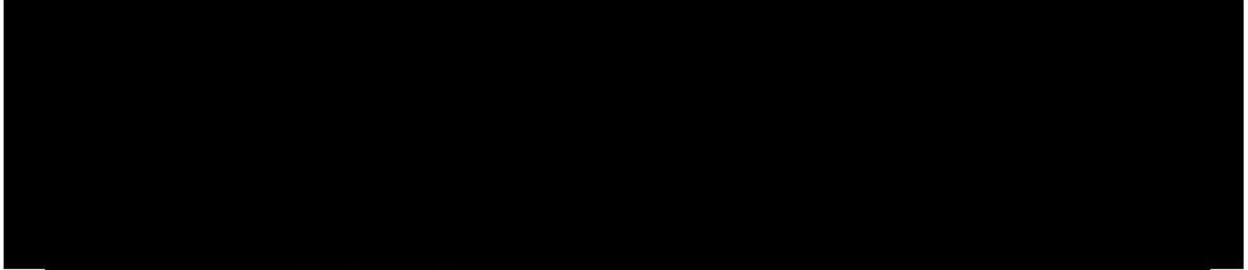
3/ Behavior problems are minimised by using choices, clear expectations and positive reinforcement.

4/ Opportunities for meaningful interaction and friendships with non-autistic peers are provided.

5/ Social skills instruction is planned and supported by staff.

Appendix K - Language Editors Report

NERESHNEE GOVENDER COMMUNICATIONS (PTY) LTD



29/03/2021

ATTENTION: SHIREEN DEVI HARIPARSAD



RE: EDITING CERTIFICATE

FOCUS AREA: MITIGATING MULTIPLE VULNERABILITIES EXPERIENCED BY LEARNERS DIAGNOSED WITH AUTISM (PHD) - UKZN

This serves to confirm that this research has been edited for clarity, language and layout.

Kind regards,



Nereshee Govender (PhD)

Appendix L - Turnitin Report