

**FACTORS AFFECTING PERCEPTIONS OF SELECTED STAKEHOLDERS  
ON EDUCATIONAL ACCESSIBILITY OF LEARNERS WITH AUTISM  
SPECTRUM DISORDERS IN MOMBASA COUNTY, KENYA**

**BY**

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**DECLARATION**

**DECLARATION BY THE CANDIDATE**

This Thesis is my original work and has never been presented for any Degree programs.

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## **DEDICATION**

To my parents, Mama Rebecca Nasimiyu and my late father, Baba Enock Masika for their encouraging sentiments and prayers which kept me going when I was carrying out my studies. To my loving husband Mr. John Mackenzie Tuki for his endless support to see me through this program special gratitude to my dear sons: Robby Tuki, Churchill Tuki and Ian Tuki for being patient and understanding throughout the period of my studies.

## ABSTRACT

Children with Autism Spectrum Disorders (ASD) have a neurological disorder that affects their social, behavioral, cognitive, verbal, and nonverbal functioning. These children have a right to access education like other children. In Mombasa County, statistics from Educational Assessment and Resource Centers (EARCs) indicated that 88 learners with ASD were assessed between 2011 and 2015 but the majority 45 (51.14) were not accessing education as only 43 (48.86) were accessing education in special schools and units. The perception of what constitutes ASD among stakeholders is important if these children have to access education. The purpose of this study was therefore to find out the factors affecting perception of the selected stakeholders on educational accessibility of learners with ASD in Mombasa County. The objectives of this study were to: establish the factors affecting perception of parents, teachers and education administrators on educational accessibility of learners with ASD. A conceptual framework indicating the relationship between factors affecting perception of selected stakeholders and the educational accessibility of learners with ASD was used. A descriptive research design was used in this study. The target population consisted of 45 parents, 45 teachers and 22 education administrators. The study used saturated sampling procedure to select 40 parents, 40 teachers and 20 education administrators. The instruments for this study included questionnaires and interview schedule. Face and content validity of the instruments were determined by the experts from the department of Special Needs Education. Reliability of the instrument was ascertained through a pilot study using a test re-test giving a correlation coefficient of 0.70. Quantitative data was analyzed through percentages, while qualitative data was analyzed according to themes and sub-themes as they emerged. The study findings revealed that perception of parents is affected by lack of academic progress among their children, lack of knowledge of ASD 25 (62.5%); lack of trained teachers (35 (87.5%) and lack of specialized learning materials 39 (97.5%). It was also revealed that teachers were not ready to handle learners with ASD due to lack of ASD knowledge 37 (92.5%); lack of specialized learning materials 38 (95.0%); Lack of schools for learners with ASD 36 (90.0%) and lack of training among teachers 40 (100.0%). It was further revealed that Education Administrators lacked knowledge on ASD and clear policies to govern the education of learners with ASD. This study therefore recommends that schools be equipped with learning materials and ASD trained teachers, awareness be created to equip education administrators with ASD knowledge and the government comes up with clear policies that will govern the education of learners with ASD. The study may be used to help Ministry of education, teachers and parents to help children with ASD access education and, contribute to the knowledge gap in the area of educational accessibility of learners with ASD.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

In this study, the following abbreviations and acronyms have been adopted:

<b>ASD:</b>	Autism Spectrum Disorder
<b>ASK:</b>	Autism Society of Kenya
<b>EARC:</b>	Education Assessment and Resource Centre
<b>INVOLVEMENT:</b>	Full participation in the education process of learners
<b>KNHCR:</b>	Kenya National Commission of Human Rights
<b>MH:</b>	Mental Handicaps
<b>PDD:</b>	Pervasive Developmental Disorder
<b>SNE:</b>	Special Needs Education

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## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of the Study**

Autism Spectrum Disorder (ASD) is defined as a pervasive developmental disorder which is characterized by impairment in communication and social interaction, and restricted, repetitive and stereotypic patterns of behavior, interests and activities and can cause difficulties in educational development and skill acquisition (APA 1994 ,WHO, 1993,Goldberg, Landa , and Zee, 2000). Autism was first used in 1943, by Leo Kanner, a Johns Hopkins university psychiatrist (POV American documentary, Inc. 2014). Before 1940s, children who would now be called autistic were labeled emotionally disturbed, schizophrenic or psychotic (NIH, 2014).

According to Individuals with Disabilities Education Act (IDEA 2004, New Jersey Department of Education (2004), autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three that adversely affects a student's educational performance. Recently autism has been defined as a neuro developmental disorder (Pelphrey, Sasson, Reznick, Paul and Goldman, (2002), as a neuropsychiatric disorder (Vrancic, Nanclares, Soares, Kulesz, Mordizinski, Plesbst and Starkstein,(2002), as a widely misunderstood development disability ( Ricco,2011) and, as a spectrum of autistic conditions that are disorders of development and not psychosis (WHO, 1994 & APA 2000). While there has been a noted improvement in diagnostic and therapeutic options for children and their families in developing nations, the attention placed on disability, particularly on autism, is considered underdeveloped and inadequate (Riccio 2011).

According to London's Task Force on autism (2001), students with ASD exhibit qualitative impairments in reciprocal social interaction and in patterns of communication, and demonstrate restricted stereotyped and repertoires of interests and activities (Wing 2011, Chakrabat & Fombonne 2005, Bouvard, Hughes and Fabienne *et al* (2008), Cohen *et al*, (2006). These characteristics correspond to the triad of social interaction, communication and imagination impairments identified by Wing and Gould in (1979). Fabien *et al*, (2008), observed that students with autism exhibit rigid thought and behavior patterns, which may lead to obsessional behaviors, repetitive interests and ritualistic play.

Aspects of Educational Accessibility includes the following as discussed by Budreckiene (2016) and Stainkerics & Mihailovs, (2012): Physical accessibility of the school; Optimal distribution of schools' network; equivalent participation of pupils in educational process despite social state; motivation for learning; favorable microclimate; inclusive education; Qualitative educational and social accessibility; accessibility of curriculum; and individualized and differentiation of educational self-education. In Kenya, the realization of the Ministry of educations' goal of providing accessible quality services to learners with Special needs and disabilities have been facing challenges in the areas of staffing, training, quality assurance, research, examinations, curriculum development and teaching/ learning materials and lack of clear policy guidelines (The National Special Needs Education Policy Framework: Ministry of Education, 2009). In order to ensure the educational accessibility of learners with SNE, the above aforementioned factors have to be realized.

The understanding of factors affecting perception of parents, teachers and education administrators on the importance of educational accessibility of learners with ASD is key because these stakeholders are the primary caregivers, implementers and providers of educational services (Brown 2014, Eape 2016, Hoefman 2014, Koegel 2011, Morrier 2011, Sarria 2015, Siron, 2015). When these stakeholders' perceptions are affected by certain factors, they fail to enroll, accept and provide good learning environment for children, which eventually affect their educational accessibility. In Mombasa County, accessibility to education by learners with ASD has been low as evidenced by the number of learners who are attending schools. Statistics from Mombasa EARC indicates that 88 learners with ASD have been assessed in the last five years but only 43 are currently accessing education in special schools and units. However it is not clear how the perception of these stakeholders have contributed to this low enrolment.

In the study by Huang and wheeler (2007) to investigate inclusion of children with autism in general education in China, it was established that although social attention to the education of children with Special Needs had started some decades back, education for children with autism was still the greatest challenge in Special education in China. It was also revealed that most school age children with autism were still kept out of regular and special schools. The study further identified various factors that affect implementation of inclusive education. These factors were; lack of social awareness and acceptance of autism; reluctance from general education teachers in including children with autism in their classroom due to negative impact on the children's academic and behavioral performance. This study was meant to establish if similar factors contributed to low enrollment and retention of children with ASD Mombasa County. The purpose of this



study was therefore to find out the factors affecting perceptions of parents, teachers and education administrators on educational accessibility of learners with ASD in Mombasa County.

Where parents, teachers education administrators and other stakeholders are fully involved in the education of children with ASD, there has been an increase in the educational accessibility of these learners (Autism New Jersey 2011, Heather, 2012) Research has also indicated that when key stakeholders take part in the decision-making process, their participation often leads to improved learning outcomes for the child on the autism spectrum (Roberts & Proir 2006). According to John (2005), parents can often drive the decision making process and regularly take a primary role in delivering intervention (Lord & McGree, 2001; Robertson & Prior, 2006). In Australia, parents play a critical role in supporting their children's learning. (Roberts & Prior, 2006). Parents in Mexico are involved in the education of their children with ASD by forming non- profit associations some of which built and run schools for their own children with ASD (Tuman, 2008).

Limaye (2016), indicated that based on his research and experience, the following factors influence the accessibility of education for children with disabilities including those with ASD: Perceptions of parents of children with disabilities and their difficulties in helping them; the general attitudes of the society; government officials; community; poverty; lack of awareness; poor physical access; availability of various support systems and government policies focusing on the education of children with disabilities. This study was however on factors affecting perception of parents on educational accessibility

of learners with ASD. It was important to find out if similar factors affected perceptions of parents on educational accessibility of learners with ASD.

In the study by Stoke and Macfane (2011) to investigate parents of children with ASD Perceptions of challenges and needs in engaging with secondary education providers, it was revealed that parents had concerns regarding the role and ability of special education teachers in both supporting their child, and communicating information to the families and the to mainstream teachers. Parents indicated that the ineffective distribution of knowledge affected their child's ability to have social and academic success. Additionally concerns were raised regarding the inappropriateness of accommodations implemented for their children. Their study was mainly on perceptions of challenges and needs engaging with secondary education providers, it did not capture factors affecting parents on educational accessibility of learners with ASD. This study therefore sought to investigate factors affecting perceptions of parents on educational accessibility of learners with ASD.

In the study by Harrington (2014) to explore maternal involvement in the education of children with ASD, findings indicated descriptively wide variations in both the type and intensity of mothers' educational involvement. Analysis showed involvement both at school and at home to be heavily influenced by the extent to which school staff actively encouraged, assisted and provided opportunities for parent involvement. In addition, severity of child behavior problems was also found to exert a uniformly negative effect on the intensity of mothers educational involvement, while the influence of family resources and demand variables varied depending on whether involvement occurred at school or at home. The focus of Harrington's study was on maternal involvement in the

education of their children with ASD. The study did not explore factors affecting perceptions of parents on educational accessibility of learners with ASD. This study therefore sought to address this gap.

According to Ricco (2011), in Kenya, parental involvement is demonstrated by the work of Autism Society of Kenya (ASK) that has helped to establish and manage educational programs for children with ASD. For example ASK established a unit at City primary school to cater for educational needs of learners with ASD. In Mombasa County, little is known to the researcher about parental involvement in the education of their children with ASD. This study therefore wanted to find out factors affecting perception of parents on educational accessibility of learners with ASD.

The studies by (Limaye, 2016, Stoke & Macfane, 2011 and Harrington, 2014) have examined factors affecting parents of children with ASD and general factors affecting education of learners' with ASD. They have not specifically investigated factors that affect perception of parents on educational accessibility of learners with ASD. The studies have also concentrated on factors affecting parents of children with ASD who were already in schools; this study was about parents of children who are not enrolled in school. It was from this background that this study sought to address the gap by investigating factors affecting perception of parents on educational accessibility of learners with ASD.

In the study done by Goodall (2013) to examine five teachers talk about contextual factors involved in teaching students on autistic spectrum (AS). It was found that majority of teachers lacked understanding of the autism spectrum and how it affects how

people interact with their environment and learning at every level. The study also confirmed that teachers' attitudes towards disability are a key factor in the inclusiveness of teaching. Teachers form an integral part of the initial social circle of a child, their knowledge to the subject is crucial to early identification of learners with ASD, which is key to their better development outcomes; furthermore, teachers also have a fundamental role in support services and educational progress of autistic children. Teachers are the ones with special skills in teaching these children in areas which they have deficits for example in communication, social and imagination, they work hand in hand with parents and make modifications in the curriculum for example in the area of IEP. Goodall's study was to establish contextual factors involved in teaching students on Autism Spectrum. It was not about factors affecting perceptions of teachers on educational accessibility of learners with ASD. This study sought to establish factors affecting teachers on educational accessibility of learners with ASD.

The study done by Lindsay (2013), to investigate educators' challenges of including children with ASD in mainstream classrooms, thirteen educators were interviewed about challenges regarding creating an inclusive environment within their classroom. Research findings revealed that teachers reported several challenges including: understanding and managing behavior; socio-structural barriers (i.e. school policy, lack of training and resources); and creating an inclusive environment (i.e., lack of understanding from other teachers, students and parents. Teachers recommended that more resources; training and support are needed to enhance the education and inclusion of children with ASD. Lindsay's study focused on educator's challenges of including children with ASD in

mainstream classrooms. This study however sought to find out factors affecting perception of teachers on educational accessibility of learners with ASD.

The study by Stidham, (2015) to investigate general education teachers' perceptions of educating students with ASD in an inclusive classroom, Results revealed that general education teachers had somewhat favorable perceptions in educating students with ASD in an inclusive classroom. There was no significant relationship between teacher's perceptions and the teachers training or education on autism, or previous experiences educating students with an ASD in an inclusive classroom. However, general education teachers reported their pre-service training on autism insufficient; they also reported rarely taking part in employment- based training regarding autism. General education teachers reported a desire to gain better understanding of characteristics of ASD, evidence-based behavioral interventions, and teaching strategies for students with ASD.

These studies and other previous studies concentrated on what is needed to promote the practice of inclusivity in mainstream contexts (Daily, 2005; Frederickson, Jones and Lang, 2010; Jordan, 2015; leyser, 2007; Leach and Duffy, 2009; Morewood *et al*, 2011; persons, MacLeod and Jones, 2011; Roberts, 2013; Rodriques, 2012; Simpson *et al*, 2003 se). They did not address specific factors that affect teachers. This study is on factors affecting teachers on educational accessibility of learners with ASD.

Education administrators are very important in educational accessibility of learners with ASD in that they are the ones who approve and establish schools, supervise the implementation of the policies, assess and refers children to schools, admit children with ASD to their schools and provide instructional resources and materials. According to

Department of Education New Jersey (2004), the administration is responsible for supporting teachers and can set the stage for the success of students with ASD. According to British Columbia, Ministry of education (2002), the duties of school principals include implementing education programs for all students in the school; assigning staff; allocating resources within the school; and ensuring that teachers have the information they need to work with students assigned to a class or program. Autism Speaks (2016), indicated that Equipping teachers and administrators with the proper knowledge base and skills allows them to ensure the safest learning environment for children on the autism spectrum. Onunga (2014) stated that the roles of head teachers who are trained in SNE impacts greatly on the improvement in the teaching and learning for the children with autism. All the above statements did not mention factors affecting perception of education administrators on educational accessibility of learners with ASD. This study therefore sought to address the gap.

Another study by Ladarola *et al* (2014) investigated services for children with ASD in large urban districts. The study used qualitative methods to evaluate the perspectives of parents, educators, and school administrators in three large urban school districts (Los Angeles, Philadelphia, and Rochester regarding services for children with ASD within the context of limited district resources. Results highlighted three primary themes: (1) tension between participant groups, special education and general education teachers), (2) necessity of ASD-specific and behavioral training for school personnel, and (3) desire for a school culture of accepting differences. These themes highlighted the importance of developing training that are feasible to deliver on a large scale, that focus on practical interventions, and that enhance communication and relationship of school personnel and

families. The study's focus was on services for children with ASD in urban areas. It was not clear whether some of the findings of the study were omomg factors affecting perception of education administrators on educational accessibility of learners with ASD. This study therefore sought to investigate factors affecting perception of education administrators on educational accessibility of learners with ASD.

Although several studies have examined the collaboration between parents, teachers and education administrators ( Cook, 2010; Grothaus, 2010; Frazer 2013; Houser 2007; Vasco, 2002; Hedeem, 2011; Ladarola et al, 2014;Tood, 2015), They have failed to produce studies that specifically investigated factors affecting perception of education administrators on educational accessibility of learners with ASD. This study therefore sorts to investigate factors affecting perception of educational administrators on educational accessibility of learners with ASD.

## **1.2 Statement of the Problem**

Mombasa County is one of the regions where research on education for learners with autism is not known to the researcher. Information from the County's EARC office indicates that the number of learners with ASD seeking educational assessment and placement has been increasing. The problem is that the number of learners with autism who have been assessed in the EARC is 88, which is much higher than 43, the number currently enrolled in school, meaning that there are several learners with autism in the region who are not accessing education despite being assessed. Low enrolment undermines provision of human and material resources. This study in turn blocks avenues for the much intended access to education. Educational accessibility of children with ASD is only realized when three main stakeholders: parents take their children to school,

teachers accept and teach the learners and education administrators admit and provide learning environment including facilities and specialized learning materials. Perception of these stakeholders determines the enrollment, retention and educational provision for learners with ASD hence determining their educational accessibility. The decisions of parents to take their children with ASD to school or not, teachers to accept and teach them and education administrators to enroll them and provide good learning environment for them will depend on certain factors such as their knowledge of ASD, their expectations, their views and their attitudes. This research was therefore intended to establish factors affecting perception of selected stakeholders on educational accessibility of learners with ASD in Mombasa County.

### **1.3 Purpose of the Study**

The purpose of the study was to determine factors affecting perception of selected stakeholders on educational accessibility of learners with ASD in Mombasa County, Kenya.

#### **1.3.1 Objectives of the Study**

The objectives of this study were to determine:

- i. Factors affecting Perception of parents on educational accessibility of learners with ASD
- ii. Factors affecting Perception of teachers on educational accessibility of learners with ASD
- iii. Factors affecting Perception of education administrators on educational accessibility of learners with ASD



#### **1.4 Research Questions**

- i. What are the factors affecting perception of parents on educational accessibility of learners with ASD?
- ii. What are the factors affecting perception of teachers on educational accessibility of learners with ASD?
- iii. What are the factors affecting perception of education administrators on the educational accessibility of learners with ASD?

#### **1.5. Assumptions of the Study**

The assumptions of this study were:

- i. There were learners with autism who have been assessed and are not in school.
- ii. There were schools where learners with ASD can be enrolled for educational interventions.

#### **1.6 Significance of the Study**

The study may complement existing studies, and contribute to the knowledge gap in the area of educational accessibility of learners with autism. The study findings may enable the various stakeholders to evaluate their perception of autism hence aiding in educational accessibility of learners with autism in the region. This may ensure that learners with autism access education in public primary schools. The research findings may enable the parents to realize the factors that their involvement in the education of children with autism to access education. The study findings may also facilitate the teachers in schools in changing their attitudes and perception, and teaching strategies towards learners with autism hence accessing education. The study findings may also be useful as it will enable education administrators to evaluate their roles in educational

accessibility of learners with autism hence promoting educational accessibility of learners with ASD. The study finding may further enhance the education policies on the educational accessibility of learners with ASD.

### **1.7 Scope of the Study**

The study was carried out in selected primary schools in Mombasa County. The selected schools were the special schools and units for learners with mental handicaps where most learners with ASD are enrolled. The respondents of the study were parents of learners with autism, lower primary teachers teaching regular schools where units for learners with mental handicaps were found as well as two special schools, one for children with mental handicaps and another one for children with Cerebral Palsy, and education administrators in those schools, as well as County Education Officers in the county.

### **1.8 Limitations of the Study**

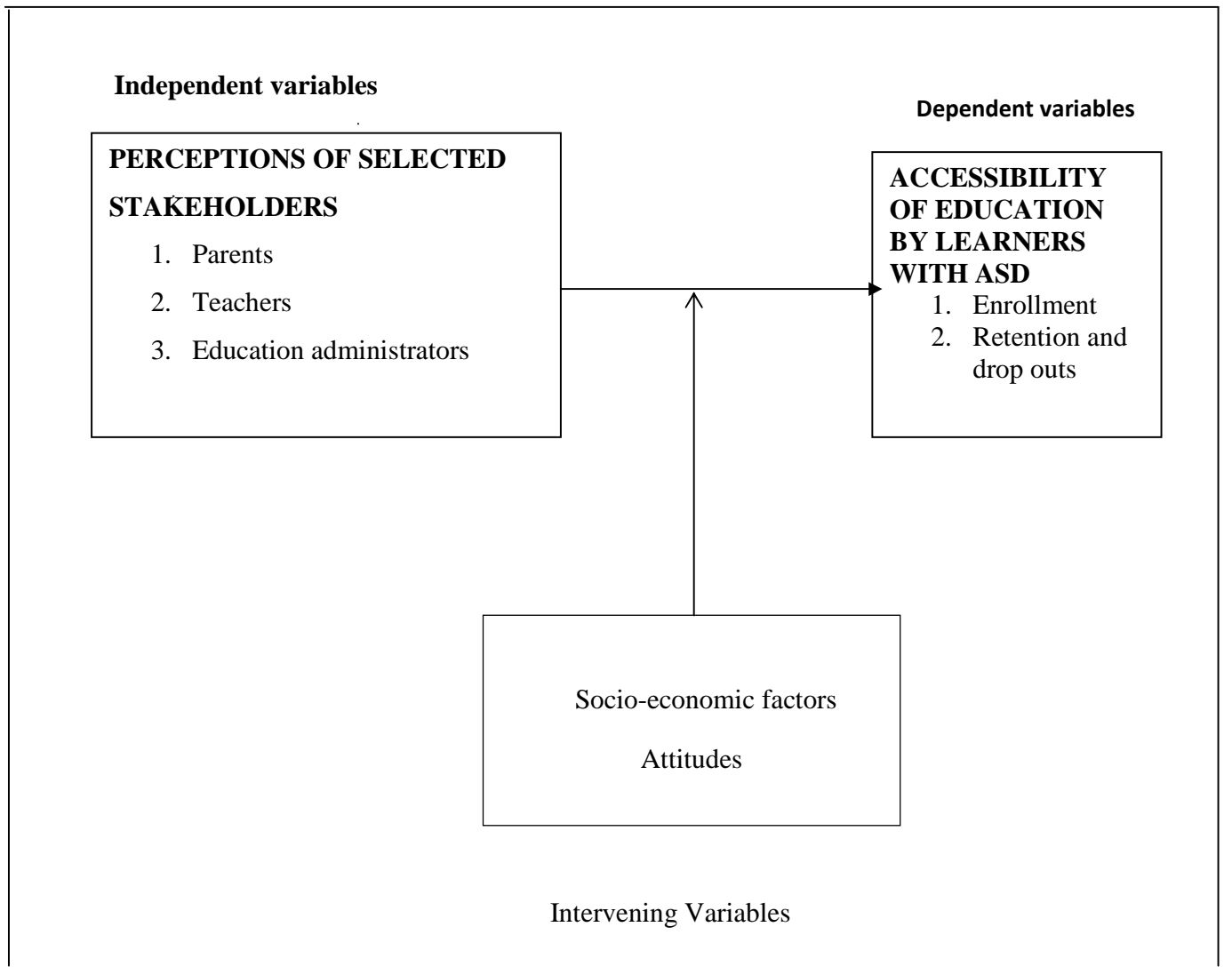
The following were the expected limitations of the study;

1. The study was limited to sample size. The sample size chosen for the study in Mombasa County is a small proportion of the entire national population of the selected stakeholders in Kenya. The findings of the study were therefore to be generalized in the area of study only.
2. The study design was another factor. The descriptive survey design forced the researcher to concentrate on collection of data from selected sample population of stakeholders in Mombasa County leaving out other stakeholders in Kenya.

### **1.9 Conceptual Framework**

The study was based on the concept that educational accessibility of any learner is influenced by involvement of several individuals. The key players in the education of children with ASD are parents, teachers and education administrators. Factors affecting Perception of these stakeholders on education of their children is crucial in that it influences their involvement in their education.

Factors affecting perception of parents, teachers and education administrators interplay with intervening variables such as government policies and other support services to determine education accessibility of learners with ASD as it influence the enrolment patterns of learners, their retention degree in schools and the general education provision to them as seen in Figure 1.1



**Figure 1.1: Conceptual Framework indicating the relationship between independent and dependent variables.**

From the conceptual framework, factors affecting perception of parents, teachers and education administrators are at play to the involvement of selected stakeholders in the education of children with ASD. They will be tackled from independent variables; factors affecting perception of parents, teachers and education administrators. These factors are interlinked and depend on each other in making access to education by learners with ASD. These perceptions include awareness or understanding of ASD, attitudes and views. For instance, lack of ASD awareness on the availability of schools may prevent parents from taking their children with ASD to school. Similarly lack of interests and ignorance among the teachers and education administrators results into not securing the instructional materials for children and absence of autism friendly facilities in schools respectively thus making access to education for children with ASD difficult.

### **1.10 Definition of Operational Terms**

**Accessibility:** This refers to enrollment, retention and provision of educational learning materials

**ASD** is a developmental and neurological disability, significantly affecting verbal and nonverbal communication and social interaction generally evident before age three that adversely affects a student's educational performance.

#### **Education**

**administrators:** These include head teachers, EARC officers, and County and Sub-County education officers.

**Factors:** Anything that affects perception of the stakeholders

**Involvement:** Full participation in the education process of learners

**Perception:** Attitudes, views and awareness of ASD

**Selected stakeholders:** These are parents, teachers, and education administrators

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

Autism Spectrum Disorder (ASD) is complex neurological disorders that have a lifelong effect on the development of various abilities and skills (Ontario Resource Guide, 2007). Helping students to achieve to their highest potential requires both an understanding of ASD and its characteristics (Flynn, 2010).

#### **2.1 Education of learners with ASD**

Autism Spectrum Disorder (ASD) present unique challenges to educators: specifically, individuals with ASD typically have marked deficits in attention, communication, socialization and motivation-all skills that are foundation of early education (New Jersey Department of Education, 2010). Social impairment include an apparent unresponsive to other people, treating people or parts of people as inanimate objects, a lack of awareness of cultural norms or social perceptiveness, absence of empathy with the feelings of others, atypical use of eye-contact and an un awareness of the concept of 'shared attention' which leads to joint referencing(Baron- Cohen & Bolton, 1993).Baron-Cohen and Bolton further stated that communication impairment are characterized by an absence of meaningful communication intent, difficulties in interpreting verbal and non-verbal expressions & gestures, confusion with the semantic and pragmatism aspects of language, speech patterns characteristics by echolalia, metaphorical language, neorealism & pronoun reversal.

Jordan, (2003) observed that students with ASDs seem to lack the urge to engage spontaneously in playful behavior and describe the rigidity of thought and behavior as the antithesis of creativity. Sensory and perceptual impairment may lead to an under or oversensitivity to noise, smell, taste, light touch or movement skills and difficulties in managing the time and sequence of activities (Autism Working Group, 2002).

Education of learners with ASD is viewed and practiced differently in different countries; In Southern Australia, according to ASA (2010), the interpretation of ASD is taken to mean the collective of only two PPDs, which is autistic disorder and Asperger's disorder. Education services for these two groups is available from three education sectors (Government, Catholic and independent), and a consultancy service is provided by ASA. In US, Chambers, Taylor & Potenza (2003) found that the total per pupil expenditure for students with autism was \$19000 a year per student, which was much higher than any other disability with the exception of multiple disabilities. In United Kingdom, the Autism Education Trust (AET) was established in November 2007 with funding from the then department for children, schools and families. (Charman, 2011). The fund is dedicated to coordinating and improving education support for all children on the autism spectrum in England. According to Charman (2011), the AET was awarded a government grant to develop a set of standards for the delivery of good practice in education provision for children with autism. In Canada according to Geneva Centre for Autism (2010), School boards across Canada report a vast increase in the enrolment of students with autism over the past few years.



According to Tony *et al* (2011), In United Kingdom, the Autism Education Trust (AET) was established in November 2007 with funding from the then department for Children, Schools and Families. The fund is dedicated to coordinating and improving education support for all children on the autism spectrum in England. In April 2011, the AET was awarded a government grant to develop a set of standards for the delivery of good practice in education provision for children with autism (Tony and *et al*, 2011).

Persons (2009) stated that parents In Ireland go to court seeking a particular type of educational provision for children with ASD. Because of these actions, educational provisions for children and young people with ASD in Ireland have been the focus of persistent scrutiny and public debate. As a result of these debates a range of services in Ireland exists to meet the varying needs of children and young people with autism spectrum. In Ireland, a range of services exists to meet the varying needs of children and young people with autism spectrum disorder. Numbers of children on autism spectrum attending mainstream provision in Ireland have been increasing, at the same time; expansion has been rapid in the number of schools offering autism spectrum specific classes. Overall, this suggests that more schools across the range of provision are enrolling children with ASD, and addressing their needs is increasingly being approached through specialist (in autism-specific classes). Pilot projects extended school year (July provision) and the home tuition scheme offered by the Department of Education and Science is also included (Parsons *et al* 2009). It is clear that in Ireland (and in the UK), most pupils with ASD attend mainstream schools which do not have special class or unit. Staff in those schools also needs information and training on ASD; nobody there is

already a well- resourced support base available in Ireland from the special education support service including many autism- specific training materials (NCSE).

In Australia education services for children and students with ASD are available from the three education sectors (government, catholic and independent), and a consultancy service is provided by Autism Australia. Currently autism specific education settings are not available but are being offered by the state government through the department of education and children's services (DECS). The government has committed to the establishment of two autism specific disability units co-located with mainstream schools in the metropolitan area (DECS).

According to the Department of Education and Science (2006), in Ireland, there is a variety in the level of support services available in the educational placements of learners with ASD. In Ireland education provision for learners with autism is made in a range of schools and settings such as general learning disabilities, special classes in mainstream primary and second level schools, ordinary classes in mainstream primary second-level schools, home based programs under home tuition schemes and centers in which ABA approaches are exclusively or largely implemented.

In US, the number of children with autism receiving public education services has been increasing (IDEA, 2007). According to US Department of Education (2007), there are federal laws that protect individuals with autism and their families by ensuring that students on the spectrum have Individualized Education Plan (IEPs) that is tailored to their specific needs.

In Mexico, according to John P. et al, children with disabilities including autism have been offered public special education services primarily through 2 programs; Units of Support Services for Regular Education(USAER) and Centers of Multiple Attention (CAM). CAM are designed to provide special education to children with severe forms of autism or other disabling conditions that create barriers to learning in a regular classroom environment.

In Israel, people tend to overlook developmental differences in their children with autism trying to avoid the stigma attached to it (Mater, 2014). This social attitude often causes delay in diagnosis until the child is of school age, thus preventing early intervention crucial to developmental disorder. According to Shammari (2006), the most important problem when working with families in the states of Kuwait is that even when a child is enrolled in a special education individualised program, his family does not apply it at home rather continues to isolate the child in his personal life. With the recognition of the strong religious beliefs attached to disability, a special program was designed in Israel to give training to Imams to change perceptions of mental illness and conditions including autism in Arab Israel society (Shammari, 2006)

In South Africa according to Roberts, (2007), there is only a hand full of special schools catering for learners with autism and some remedial schools have established separate autistic units. According to Julie-Anne *et al.*, the general teaching body in South Africa is not fully supportive of the notion of including all autistic children into mainstream settings, only students with Asperger's thus leaving out other students on Autism Spectrum.

In Nigeria, many children with ASD are either not diagnosed or misdiagnosed (Okey-Martins 2007). According to Okey-Martins, these either end up being hidden at home or “lucky” to be clubbed with the deaf, dumb or mentally handicapped or if the parents are rich and influential, they are placed in mainstream schools where the teachers are advised to keep promoting them from class to class as they grow chronologically.

In Kenya, there is lack of awareness with the parents and subsequently their children suffer in silence. Education of learners with ASD goes together with those of learners with mental handicaps in spite of the fact that individuals with ASD may not be having mental handicaps (Otieno *et al*, 2014). Research carried out by Matasio (2010) indicated that Kenya does not have specific legislation on education of learners with ASD. KNCHR (2007) Report indicated that in Kenya children with disabilities such as ASD have immense difficulties exercising the right to education. Provision of education services has often skewed towards four traditional categories: hearing impairment; visual impairment; mental handicapped and physical handicapped leaving out all other areas which includes autism (Seasonal paper No.5 of 2012).

## **2.2. Factors affecting Perception of Parents on Educational Accessibility of Learners with ASD**

After researchers became certain of the important role played by parents in the education of their children with ASD, subsequent studies began to focus on the perception of parents on the educational accessibility of their children with ASD in general. A study on the mainstream schooling experiences of students with ASD and their parents was conducted by Harrington (2014) to explore maternal involvement in the education of

children with autism, the finding of this study indicated Descriptively, wide variation in both type and intensity of mothers' educational involvement.

Regression analyses showed involvement, both at school and at home, to be heavily influenced by the extent to which school staff actively encouraged, assisted, and provided opportunities for parent involvement. In addition, severity of child behavior problems was also found to exert a uniformly negative effect on intensity of mothers' educational involvement, while the influence of family resources and demand variables varied, depending on whether involvement occurred at school or at home. The findings of this study also indicated that the majority of parents perceived that their children had restricted participation in mainstream schools and that their educational progresses were characterized by disruption. Students' experienced academic mismatch and standing out in mainstream schools over time. Parents universally experienced a perpetual battle to support their children's participation in mainstream over time. Parents and students actively tried to influence their participation but most perceived that had little control over their participation in mainstream schools. This indicated that the school environment had a significant constraining influence on their participation. Students with ASD may, therefore, not be receiving an education in mainstream schools consisted with best practice as outlined in the literature (Lynch & Irvine, 2009; Osler & Osler, 2002).

A study done in (2004) by Wade focused on perceptions of parents of students with autism towards IEP meetings. The findings of this study Indicate that parents did not perceive themselves as being treated as equals during IEP meetings. Parents believed that their input was not valued or welcomed by educators. Not having an equal voice towards their child's education prevented parents from positively influencing outcome of their

child's IEP meetings in terms of obtaining quality services and building positive relations with educators. The study also revealed that educators failed to implement proper IEP protocol. According to them, students objectives agreed upon in IEP meetings were not always fully implemented for students receiving special education services. Those interviewed cited that educators tended to view the IEP process as a formality. The study further revealed that without initiative to become knowledgeable about special education law, they would have been unaware of all the services that school districts were entitled to provide for their children. The implication of this study is that awareness of special education laws among parents is very critical since it is through this knowledge that parents can be able to acquire services for their children on the autism spectrum. It is important to note that the study was on parental participation in IEP meetings of their children with ASD who were already in school. This study sought to find out factors affecting perception of parents of children with ASD who were not in school.

Nickels (2010), investigated the perception of parents of children with ASD, special education teachers and general education teachers in Northern Tennessee public school system regarding educational interventions for children with ASD including what interventions they have found effective, the barriers and challenges they have faced and how they view their relationships with one another. Nine themes emerged describing parents and teacher perceptions of educational interventions they found effective for children with ASD. These themes were: intensive early interventions using multiple methods; a structural learning environment; adult-mediated and peer-mediated interventions for social and communication skills; inclusion with a balance of direct services; support staff to facilitate inclusion; a functional approach to problem behaviors;

alternative and augmentative communication interventions; and sensory –motor interventions.

Another study by Jindal-Snape (2005) investigated perceptions of parents and professionals on effective education for children with ASD. Results indicated that parents seem to be of the view that whatever the educational provision, teachers should have adequate autism specific training. If all teachers were trained in this way, parents see advantage in the child being in mainstream settings. More importantly, whatever the provision, the quality of delivery, staff attitude and curriculum modifications play an important part in creating an inclusive environment. This study was limited to perceptions of parents and professionals on effective education for children with ASD in an inclusive environment.

Another study by Stokes and Macfarlane (2014) examined perceptions of challenges and needs in engaging with secondary education providers. Results of this study identify that parents have concerns regarding the role and ability of special education staff in both supporting their children and communicating information to the families and to mainstream teachers. Parents believe this ineffective distribution of knowledge affects their child’s ability to have social and academic success. Additionally, concerns are raised regarding the inappropriateness of accommodations implemented for their children. The study however did not put into considerations the factors that affect perception of parents themselves on educational accessibility of learners with ASD.

In West Australia (WA), powerful Moral, social justice and political arguments have convinced parents that it is their democratic right to place their children into mainstream

educational environment so that their children may eventually take up their rightful places in a mainstream adult life (Oliver and Barnes,2010; Slee, 2011). Current studies in WA indicates that while islands of excellent mainstream inclusive practices do exist, the educational experiences for many students on the AS can often be one of hostility, inconsistency and unreliable (Cologon, 2013; Morewood, 2011). Without appropriate training in best practice educational methods, these students can present an inordinate educational challenge to both parents and educators alike (McDonald, 2014). McDonald stated that when parents feel like they are waging the war of their lives trying to gain appropriate and effective services to maximize the potential of their children on AS, some of them store hope in the belief that with the right type and intensity of intervention, they will be able to cure their child to their autism. As time goes on, parents gradually realize they will have to become increasingly self reliant and continually strategize solutions to secure the most appropriate educational intervention for their individual child.

According to Mater (2014), In Israel, parents tend to overlook developmental differences in their children with autism trying to avoid the stigma attached to it hence causing delay in diagnosis until the child is of school age, thus preventing early intervention crucial to developmental disorder. The most important problem when working with families in the states of Kuwait is that even when a child is enrolled in a special education individualized program his family does not apply it at home but rather continues to isolate the child in his personal life (Zaid (2006). This study therefore sought to find out if stigma is one of the factors affecting perception of parents on educational accessibility of learners with ASD



In Great Britain according to Whitaker (2007) as sighted by Nickels (2010), parents' top priority for their children with ASD is on educational interventions for social skills. According to Whitaker, parents prefer being kept well informed about their child's progress, and value the willingness of school personnel to listen and take their concerns seriously. Findings of the study by Spanna *et al*, (2003) indicated that parents of children with ASD in US feel that teachers should receive more education about autism training in how to teach these learners.

In a study carried out by Dublin Education and Science (2006), Parents stated that they were dissatisfied with the procedures and processes for the diagnosis and assessment of ASDs. The same parents also expressed high level of satisfaction with their children's placement in the ABA centers. They further endorsed the opportunity provided to work with their children in the centers, which enabled them to apply observed approaches at home. It is apparent from this evaluation of the provision made for pupils with ASDs that considerable progress has been made in establishing a range of services since autism was given recognition as a discrete disability category in 1998 (Education and Science, 2007). Parents in general are pleased with the educational provision being made for their children, although they express concern about delays in diagnosis. Wrong Placement of children with ASD may be one factor that makes parents of children with ASD not to take their children with ASD to available schools.

In the study carried out by Acad (2014), on Latino parents' perspective of barriers to autism diagnosis, parents reported low levels of ASD information and high levels of mental health and disability stigma in the Latino community. Parents had poor access to care due to poverty, limited English proficiency and lack of empowerment to take

advantage of services. The study also revealed that the process of ASD diagnosis itself is slow, inconvenient, confusing and uncomfortable.

Starr *et al* (2006), in their research to explore parental perceptions and satisfaction on a variety of aspects related to providing an effective education to children with ASD, Down Syndrome and Learning Disabilities, it emerged that age of the child was a significant factor contributing to According to Starr *et al* (2006), parents who believe that having knowledgeable teachers who also allow them to participate in the decision making concerning their children and having teachers who are willing to learn about autism and make adaptations are among the key ingredients contributing to their satisfaction. This study focused on parental perceptions and satisfaction for three categories, it did not mention factors affecting perception of parents of children with ASD on educational accessibility of learners with ASD.

According to Ontario Resource Guide (2007), involving families in planning their child's educational program may assist in developing the student's ability to learn. Families are often able to provide additional opportunities for the student to practice skills. This may also enhance the student's ability to generalize skills to various settings. The Guide further states that students will be more successful in learning and generalizing skills when families and schools share a common focus, approach, and goals. In the same Guide, it was stressed that positive relationships between home and school have been shown to improve parental involvement and increase parents' comfort level in working with the school.

In a study by LIEN foundations (2016), to investigate views of parents of children with SNE with regard to children with SN and education was focused on pre- school education in Singapore, it was established that there was inadequate support in pre- schools. Parents reported that they encountered difficulties when enrolling their children in preschools as schools were unwilling to take their children because of their special needs and that those who took their children had in experienced or untrained teachers. In addition, parents stated that the curriculum offered by preschool was not suitable for children with special needs and that the preschools were not equipped with the right facilities to meet their children needs. This study focused on the views of parents on the education of children within preschool. The study did not also put into consideration the specific views and factors affecting perception of parents of children with ASD. It was from this background that this study sought to address the gap by investigating factors affecting perception of parents on educational accessibility of learners with ASD.

### **2.3 Factors affecting Perception of Teachers on Educational Accessibility of Learners with ASD**

A study done by Cavanaugh (2012), focused on teachers' perceptions of interventions for children with autism in a school setting. The study was conducted to determine how teachers' perceived interventions associated with ASD in a school setting. The interventions examined were social stories, and visual cues. The findings from this study confirm that teachers agree and have had some experience with social stories and visual cues. Furthermore, the findings confirm that teachers are interested in additional training on social stories and visual cues. This confirms that agree that they have had experience with the interventions examined and consequently are interested in additional training of

social stories and visual cues. The study suggests that teachers do indeed view social stories and visual cues as helpful and useful. The interpretation of these findings is supported by previous studies (Fredrickson, 2006; Powel-Smith & Kincaid, 2004). The implications of this study is that teachers view social stories and visual cues as important but they lack training to effectively implement social stories and visual cues into their classroom setting. The study's focus was on teachers' perceptions of interventions for children with autism in a school setting. This study's focus was on factors affecting perception of teachers.

Cleary (2011), explored the views and perceptions of teachers on the inclusion of children with ASD in mainstream primary schools. Findings of this study indicated that mainstream teachers lack training in ASD specific approaches is contributing to lack of confidence to meet the needs of children with ASD. Teachers held more positive attitudes to the concept of inclusive education for children with ASD. However, they had many reservations about reality of inclusion for all children. A key conclusion of this study highlighted the need for mainstream teacher training in ASD specifics.

Another study by Rodriguez and Moreno (2013) investigated support, inclusion and special education teachers' attitudes towards the education of students with ASD in Spain. The findings of this study showed a predominantly positive view of teachers' expectations regarding the education of pupils with ASD, their own ability to influence their development, and their relationships with the families. This result is in line with previous studies that show that teachers involved in the education and inclusion of children with ASD are usually engaged (Campbell and McGregor, 2001; McConkey and Bhliggri, 2003; Sharmari, 2006). Although the study revealed the expectations of teachers

regarding the education of learners with ASD, it did not reveal the factors that affect the teachers' perception on educational accessibility of learners with ASD.

Karen (2012) examined special education teachers' perceptions and beliefs regarding homeschooling children with ASD. Results of this study indicated that there was no difference in perceptions and beliefs among teachers who have and have not had experience with homeschooling. Results also indicated that teachers were concerned that children were missing out on academic and social opportunity, and did not seem to consider the flexibility and individual possibilities homeschooling provides. Although Karen's study was on perceptions of teachers, it did not investigate the factors that affect perception of teachers on educational accessibility of learners with ASD. This study therefore sought to address the gap.

Another study by Julie-Ann, (2007) examined perceptions of both mainstream and specialized teaches in terms of the mainstreaming of autistic students in South African schools. Results of this particular study suggest that neither of the sample groups perceive the South African context ready for mainstreaming of autistic students. They felt that students with Asperger's, higher functioning autism, could be included more successful. However on the premise that all autistic students were going to be included, a number of changes would need to be made. These included the provision of paraprofessionals, smaller classes and a stronger emphasis on safety. Teachers would also need to receive extensive training on dealing with behavioral problems that autistic students may exhibit. It was further noted that mainstream teachers are in need of practical exposure to autism and training in this area. The study's main focus was perception of teachers on

mainstreaming of learners with ASD. This study's focus is on factors affecting perception of teachers on educational accessibility of learners with ASD.

Cassady, (2011), examined teachers attitudes towards the inclusion of students with autism and emotional behavioral disorder, the findings of this study suggest that the presence of typical characteristics of the two disabilities influence teachers' willingness to have the populations in their classrooms. In general, the participants felt that it would be more advantageous to have the child with autism be included in their regular education classrooms than the child with Emotional and Behavioral Disorders (EBD). They also expressed a larger amount of confidence implementing the IEPs, adapting lessons according to the students needs and collaborating with colleagues to create appropriate programs and accommodations for children with autism. The focus of the study was also on inclusion of students with ASD and not on factors affecting perception of teachers on educational accessibility of learners with ASD.

In Scotland, teachers perceive parents as needing high level of emotional support from school staff and sometimes unrealistic goals (Glashen *et al* 2004). According to *Busby et al* (2012), teachers believe that teaching children with autism is a highly individualized and specialized process that requires highly specialized skills and personal attributes. Teachers also believe that in order to effectively teach students with autism, the teachers require to be highly trained in the area of autism (Busby, 2012). Busby further stated that although teachers appear to understand the purpose of an IEP, they feel that IEP procedures, data collection and record keeping for children with autism are extensive and therefore time consuming. Teachers also feel that they are not competent enough to write

an IEP. This study sought to find out if lack training is one of the factors affecting perception of teachers on educational accessibility of learners with ASD

In a study carried out by Howe, (2014) in Seattle Public schools to examine educators' perceptions of the efficacy of Autism Inclusion programs, several themes came up: one of the themes was that teachers had positive attitudes towards inclusion of learners with ASD. The recurring opinion expressed by participants was that inclusion benefited typically developing peers, teaching them about differences and helping them develop empathy .when asked about the greatest challenge(s) in working with children with ASD, teachers said that the greatest challenge in working with students with ASD is the huge range of abilities, limitations and behavioral characteristics children present within the Autism Spectrum Disorder. Teachers also said that more support was needed to improve inclusion. Most participants reported that their students with ASD received tutoring, pulling out services and/or an Instructional Aid (IA). This study sought to find out if teachers in Mombasa County are also faced with similar challenging behavioral characteristics presented by children with ASD.

In the study by Howe (2012), teachers also reported that they had received inadequate or no training at all on ASD. They therefore recommended for better training and education for teachers and support staff about ASD. Teachers also believed that their students with ASD were felt to be a part of the classroom by their typically developing peers; they felt that their students with ASD were fully included in the class. On teacher intervention strategies, most teachers reported that they did not use research –based methods in their classrooms and that they were not knowledgeable about research –based methods.

In a study done by Helps *et al* (1999), to examine the teachers' views of autism and their training needs, teachers emphasized a need for further training and support regarding behavioral management and teaching methods. According to Vacco (2002), these findings illustrate that the majority of teaching staff lacked a basic theoretical understanding of autism, most likely due to inadequate training. This study sought to find out if lack of training is one of the factors affecting perception of teachers on educational accessibility of learners with ASD.

In a study by Hayes *et al* (2013), to examine any correlation between general education teachers' perception of preparedness to teach students with ASD, and their actual knowledge in relevant areas of instruction through inclusive instruction, it emerged that when teachers indicated academic training or professional development regarding students with ASD, a significant positive correlation was found with their levels of actual knowledge in areas related to methods of teaching and characteristics of students with ASD. Teachers believe that teaching children with autism is a highly individualized and specialized skills and personal attributes.

Another study by Edward (2015) explored teachers' knowledge and perceived knowledge of teaching children with ASD in Tanzanian regular schools. The study revealed that most of the primary school teachers had low knowledge about children with ASD. The study recommended that different educational stakeholders should work hand in hand with teachers so as to let every child with ASD learn and enjoy the benefits of education in regular schools. It was therefore important to find out the actual knowledge of ASD by teachers in this study.



Previous studies have concentrated on what is needed to promote the practice of inclusivity in mainstream contexts (Daily, 2005; Frederickson, Jones and Lang, 2010; Jordan, 2015; leyser, 2007; Leach and Duffy, 2009; Morewood *et al*, 2011; persons, MacLeod and Jones, 2011; Roberts, 2013; Rodriques, 2012; Simpson *et al*, 2003). Furthermore, existing research has primarily focused on teachers perspectives of general idea of inclusion (Cassady, 2011; Cleary, 2011; Howe, 2014; Rodriques & Moreno, 2012). This study's focus was on factors affecting perception of teachers on educational accessibility of learners with ASD whether in an inclusive setting or not.

#### **2.4. Factors affecting Perception of Education Administrators on Educational Accessibility of Learners with ASD**

The role of education administrators is to ensure appropriate instruction, plan for provisions of special education and related services, and allocate resources (Thompson and O' Brian, 2007). Heather *et al* (2012) in their Journal of Special education leadership stated that because the educational needs of learners with ASD are complex, knowledge of the disorder within these contexts is essential for several reasons. First, special administrators are responsible for ensuring students with disabilities receive a free, appropriate education designed to meet their individual needs, second, administrators must have knowledge of students needs in order to allocate the resources necessary to realize positive outcome. Additionally special education administrators must be able to represent district and student interests in issues involving litigation.

Study by Hina and Sulman (2014) examined Perceptions of school administrators about facilities available in private and government schools for children with ASD in Pakistan. Nineteen school administrators were interviewed from six major cities. The results of the

study indicated that different diagnostic and therapeutic services were available for children with ASD in Pakistan. On the other side; professionally qualified trained teachers, accessible buildings, pick and drop facilities for children were their major problems. Hina and Sulman's study did not investigate factors affecting perception of education administrators on educational accessibility of learners with ASD. This study therefore sought addresses the gap.

Another study by Nuray & Macarough, (2010) investigated elementary school administration and teachers' perceptions on children with ASD. Results of this study indicated that although teachers and administrators believe autistic children need to have their special education class, they cannot ignore the positive effects of having them in regular class. They emphasized the inefficiency of classroom teachers, and on that, negative attitudes of parents as the biggest problems they faced. They expected Ministry of education to open autistic children education centers and special education classes. The study also revealed that teachers' lack of knowledge and practice in teaching autistic individuals cause stress for both parents hence parents of students who are autistic may think that teachers are working more with the autistic ones and ignore their child.

Another study by Workman (2016) investigated the attitudes of school principals towards the inclusion of students with ASD in general education settings of Virginia Superintends region. The overall results concluded that principals had very neutral attitudes towards students ASD. However, they did tend to favor a more inclusive placement for these students within their school. Additionally the challenges faced by principals in rural school did not seem to impact their attitudes towards the students' wit ASD in their buildings. Workman's study was on attitudes of school principals towards inclusion of

students with ASD and not on factors affecting perception of education administrators on educational accessibility of learners with ASD.

The study by Marias (2014), investigated school factors influencing the implementation of inclusive education in public primary schools in Isinya District of Kajiado County, Kenya. The study revealed inadequacies of physical resources that would assist in implementation of inclusive education. At the same time, the learning resources available were not adapted to the needs of children with SNE and that contributed to them staying away from schools as they were not fully accommodated within the settings existed in public primary schools. There were also inadequacy of teaching and learning resources and most of them were not suited for children with SNE. The study was about inclusive of children with SNE in general and not on factors affecting perception of education administrators on educational accessibility of learners with ASD.

The above studies are clear indication that most studies have examined perceptions of school administrators on available facilities, perceptions of school administrators and teachers on children with ASD, attitudes of school principals towards inclusion of students with ASD, and factors influencing the implementation of inclusive education in public primary schools, they have not investigated factors affecting education administrators on educational accessibility of learners with ASD. This study therefore sought to investigate factors affecting perception of educational administrators on educational accessibility of learners with A.

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Research Design**

The research design used in this study was descriptive research design. A descriptive research design involves observing and describing the behavior of a subject without influencing it in anyway (Shuttleworthy, 2008). The main idea behind using descriptive design is to better define an opinion, attitude, or behavior held by a group on a given subject ( Fluid survey University 2017). According to Fluid survey university, descriptive research design enables one to measure the significance of his or her results o the overall population he or she is studying as well as the changes in his or her respondent's opinions attitudes and behaviors' also allows describing characteristics of a population or phenomenon being studied as it occurs in the environment (2003-2014 educational portals). There are three main types of descriptive methods according to Hale (2017). These are: observational method, case-study methods and survey methods. In survey method research, participants answer questions administered through interviews and questionnaires. The descriptive design in this study enabled the researcher to use questionnaire and interviews to collect both qualitative and quantitative data from the sampled population.

#### **3.2 Area of the Study**

The study was carried out in Mombasa County, Kenya. Mombasa County is the second largest city in the country covering an area of 229.7 km<sup>2</sup> excluding 65km<sup>2</sup> of water mass. The County is situated in the South Eastern part of the Country, It borders Kilifi County to the North, Kwale County to the South and Indian Ocean to the East. It is located in

latitudes  $39^{\circ} 40' 0''$  East and longitudes  $4^{\circ} 31' 0''$  South. It has one special school and 12 units for learners with mental handicaps. There are other special schools in the region which includes one special school for learners with visual impairments, one special school for learners with hearing impairment one primary school and one secondary school for learners with physical handicaps, and one school for cerebral palsy. Mombasa County has a population of about 1.2million people per 2009 census. It is a regional cultural and economic hub, has a large port and international airport. It is also an important regional tourism center. Mombasa is located on the east coast of Kenya in the former coast province. It borders the Indian Ocean and is a historical trading center. Mombasa County was selected as the study area for convenience purposes as the researcher resides from the same area. Mombasa was chosen as an area of study due the fact that it is the second largest city in Kenya with very little known about factors affecting perception of selected stakeholders on educational accessibility of learners with ASD.

### **3.3 Target Population**

Target population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. In this study the target population was 45 parents of children with ASD who were assessed but not in school, 45 lower primary teachers and 22 education administrators, from two special schools, one for learners with intellectual disabilities and one for learners with cerebral palsy and 12 regular schools where units of learners with intellectual disabilities are found, four EARC centers and four Sub-county Education Officers. These institutions were chosen because learners with ASD are mainly placed in them.

### 3.4 Sample and Sampling Techniques

The sampling technique used in this study was saturated sampling. The researcher used saturated sampling technique to select 40 parents, 40 teachers and 20 education administrators. The study used saturated sampling since the entire target population was used as the sample population apart from the ten percent which was used during the piloting. Saturated sampling was used in this study due to the fact ASD is a low incidence disability (Friend and Bursuck, 2012).

**Table 3.1: Sample Population**

<b>POPULATION CATEGORY</b>	<b>POPULATION.</b>	<b>SAMPLE</b>	<b>%</b>
		<b>POPULATION</b>	
Parents	40	40	100
Teachers	40	40	100
Educational administrators	20	20	100
Total	100	100	100

### 3.5 Data Collection Instruments

The data collection instruments in this study were questionnaires and interview schedules. Questionnaires were used to collect data from parents and teachers. While interview schedules were used to collect data from education administration.

#### 3:5:1 Parents' Questionnaires

Questionnaires were used to collect information from parents of learners with ASD. The instruments were based on the role of parents on educational accessibility of learners.

They were also used to assess the knowledge, views, practices, and the attitudes of parents on educational accessibility (Appendix A).

### **3:5:2 Teachers' Questionnaires**

Questionnaires were used to collect information from teachers of learners with ASD. The instruments were based on the role of teachers on educational accessibility of learners. They were also used to assess the knowledge, views, practices, and the attitudes of teachers on educational accessibility (Appendix B).

### **3:5:3 Interview Schedule for Education Administrators**

The interview schedule were used to collect data from education administrators (Appendix C).

## **3.6 Validity and Reliability of Research Instruments**

Validity of an instrument is the extent to which an instrument measures what it is intended to measure. Reliability of an instrument concerns the extent to which the instrument yields the same results on repeated trials.

### **3.6.1 Validity**

In order to establish face and content validity, the researcher gave the instruments to experts from the department of Special Needs Education who were able to evaluate items in the instruments. The comments, suggestions and inputs of the experts were incorporated into the instruments. The researcher then revised the tools according to the experts' suggestions before it was pre tested.

### **3.6.2 Reliability**

Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Orodho, 2004). The reliability of research instruments were ascertained through a pilot study using a test-retest on ten percent of the population that was not used in the actual research. This method of assessing reliability of data involves administering the same instrument to the same group twice (Mugenda & Mugenda, 2003). The developed questionnaires were administered to a few identical subjects who did not take part in the real study. The scores were scored manually. The same questionnaires were administered to the same subjects under similar conditions after two weeks. The researcher then correlated to establish the extent to which the content of the questionnaires was consistent in eliciting the same responses every time the instrument was administered. The results from the two tests resulted to a correlation coefficient of 0.7. After correlation, ambiguous questions were removed and some moderations and introduction of new items was done, then the instruments were accepted as reliable.

### **3.7 Data Collection Procedure**

The researcher sort audience with teachers, and education administrators to brief them about the study. The researcher then organized to meet the parents at different places. The questionnaires were distributed to all the respondents to be filled and returned.



### **3.8 Data Analysis**

Quantitative data was analyzed through percentages, means and SPSS while qualitative data was analyzed according to themes and sub-themes as they emerge. The researcher then transcribed the information and transformed them into emerging themes as they were.

### **3.9 Ethical Considerations**

The researcher sought clearance from the University to be able to collect data in the targeted schools. The researcher explained to the respondents the purpose of the study and requested their willingness to participate in it. The subjects were assured of their confidentiality.

## **CHAPTER FOUR**

### **RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the results and discussion of the data collected on the factors affecting perception of selected stakeholders on educational accessibility of Learners with ASD in Mombasa County. The findings of the study are presented and discussed according to the research objectives. The objectives were to: Determine the factors affecting perception of parents on educational accessibility of learners with ASD, determine the factors affecting perception of teachers on educational accessibility of learners with ASD, and determine the factors affecting perception of education administrators on educational accessibility of learners with ASD.

#### **4.2 Factors Affecting Perception of Parents on Educational Accessibility of Learners with ASD.**

The first objective of the study was to find out the factors affecting perception of parents on educational accessibility of learners with ASD. Data regarding factors affecting perception of parents on educational accessibility of learners with ASD was collected using questionnaires.

Parents were asked to state reasons why their children were not enrolled in schools. In their responses, 9 of 40 parents stated that they had withdrawn their children from school,

One parent stated:

*I withdrew my child from school since he had stayed in the same class without showing any progress.*

Withdrawing children from school limits their educational accessibility.

Eight parents further stated that that teachers were not doing enough to address the needs of their children since there wasn't any evidence of academic progress of their children, 3 parents stated that their children were not ready to go school in terms of basic skills.

Another parent stated:

*My child with ASD has not developed most basic skills such as socialization and communication and therefore he is not ready to go to school.*

Two parents stated that there were no schools to admit their children with ASD. Parents also indicated that their children were severely handicapped to be taken to school

One a parent stated;

*“My child is crippled, cannot eat, speak and walk, taking him to school is useless”*

Other reasons that they gave included; feeling that teachers not do enough to assist learners with ASD, their child's special needs and variety of other reasons including traveling inconveniences and distance. These findings coincide with the findings of Parsons and Lewis (2010) which applied to parents in United Kingdom. When parents feel that their children are not progressing academically, they tend to withdraw them from school to avoid incurring more expenses that are not yielding positive results. Taking their children to school is expensive in terms of transport, therapies and other ASD related expenses.

Parents were asked to state the age at which their children were assessed. Their responses were summarized in Table 4.2

**Table 4.1: Age at which children with ASD were assessed (n= 40)**

<b>Age in Years</b>	<b>Frequency</b>	<b>Percentage</b>
Below 3	4	10.0
4	5	12.5
5	16	40.0
6	8	20.0
7	2	5.0
8	1	2.5
9	0	0.0
10	0	0.0
11	1	2.5
12	1	2.5
Not known	2	5.0
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>

Table 4.2 shows that many children with ASD 16 (40.0%) are assessed at 5 years. This indicates that most children with ASD are assessed late when they are of school going age most likely in pre-school. This finding concurs with CDC (2015) which indicated that many children on ASD do not receive a final diagnosis until much older. This delay means that children with ASD might not get the early educational interventions which are key to their educational accessibility. This finding concurs with the finding of Mater (2014) which indicated that in Israel, people tend to overlook developmental differences in their children with autism due to social attitudes which often causes delay in diagnosis until the child is of school age, thus preventing early intervention crucial to developmental disorder. Sternberg (2003) stated that because young infants are so limited in their range of behavior, autistic disorders are generally discovered gradually, and rarely diagnosed before the age of two or three. According to Mater, Parents may not

realize that their baby's behavior is different from that of other infants until he or she reaches an age where a wide range of behaviors are typically displayed. Parents were asked to state the institutions where their children were referred to after assessment. Their responses were summarized in Table 4.3. Parents were told to state institutions where their children were referred to after assessment. Their responses were summarized in Table 4.3.

**Table 4.2: Institutions where children with ASD were referred to after assessment (n= 40)**

<b>Institutions</b>	<b>Frequency</b>	<b>Percentage</b>
Schools for children with MH	16	40.0
OT/PT or Neurologists	5	12.5
Schools for children with CP	3	7.5
Regular schools and therapies	9	22.5
Schools for children with HI	4	10.0
Other Special schools	3	7.5
<b>TOTAL</b>	<b>40</b>	<b>100.0</b>

Table 4.3 shows that 16(40%) of children with ASD were referred to schools for children with mental handicaps. referring children with ASD to schools specifically meant for children with mental handicaps is attributed to the fact that many people believes that children with ASD have mental handicaps and therefore should be placed in schools for children with mental handicaps. This finding concurs with the findings of Hose (2010)

which indicated that children with ASD in Japan are also affected by some degree of intellectual development and therefore schools and classes for SNE conduct a wide variety of education from instruction with major emphasis on intellectual disabilities. This finding also concurs with the finding of Cohen and Bolton (2012) where it was revealed that majority of children with ASD has mental handicaps and that their educational progress is often slower. However, not all children with ASD also have mental handicaps and placing them in schools for learners with mental handicaps undermines their learning thus minimizing their educational accessibility.

Parents were also asked to state how much they know about ASD. Their responses were summarized in Table 4.4.

**Table 4.3: Knowledge of parents of ASD (n= 40)**

<b>Explaining ASD</b>	<b>Frequency</b>	<b>Percentage</b>
Could explain ASD	5	12.5
Hardly explained ASD	10	25.0
Could not explain ASD	25	62.5

Table 4.4 shows that 25(62.5) of parents could not explain ASD. This implies that most parents do not understand ASD. Lack of ASD knowledge affects the parent’s ability to be aware of how and where their children’s educational interventions can be met. Lack of knowledge may also affect their attitudes and expectations towards the education of their children. Lack of knowledge or ignorance by parents was one of the reasons that parents sighted in the study done by Zuckerman *et al* (2015) in their study on ‘‘Latino parents’ perspectives of barriers to autism diagnosis which impeded early identification.

Mthimunye (2014) in the study ‘the knowledge and experiences of single mothers raising an autistic child in a low- income community in the Western Cape found out that most parents believe that they lack knowledge of ASD. The study also concurs with the study by Cohen (2012) on invisible disability in Kisumu whose findings indicated that a good number of parents didn’t know anything about autism and had only heard about it when it was being used in relation to their children. This lack of ASD knowledge among parents hinders them from knowing that learners with ASD need education. It also hinders them from knowing institutions where their children can access education. Lack of knowledge may also make some parents to despair from seeking for educational interventions for their children. All these lead to them failing to take their children to school and providing basic needs which limit their children’s educational accessibility.

Parents were given statements to state their level of agreement or disagreement concerning the educational accessibility of learners with ASD. Their responses were summarized in Table 4.4

**Table: 4.4: Parents' level of agreement or disagreement concerning the educational accessibility of learners with ASD**

STATEMENT	SA F (%)	A F (%)	D F (%)	SD F (%)	NS F (%)
1. Children with ASD should only be enrolled in schools where teachers are trained in SNE	35 (87.5)	1 (2.5)	2 (5.0)	1 (2.5)	1 (2.5)
2. More teachers should be trained in the area of autism before children with ASD are enrolled in their schools	36 (90.0)	4 (10.0)	0 (0.0)	0 (0.0)	0 (0.0)
3. Parents are not aware of where to enroll their children with ASD	24(60.0)	11(27.5)	2 (5.00)	2 (5.0)1	1 (2.5)
4. Teachers do not have time to prepare specialized learning materials for learners with ASD	32 (80 00)	7 (17.5)	0 (0.0)	0 (0.0)	1 (2.5)
5. Schools should be given extra funds to buy specialized materials for learners with ASD	36 (90.0)	4 (10.0)	0 (0.0)	0 (0.0)	0 (0.0)

**KEY:**

*SA: Strongly Agree; A: Agree; D: Disagree; SD: Strongly Disagree; NS: Not Sure*



As for schools where children with ASD should be enrolled 35(87.5%) of parents strongly agreed with the statement that children with ASD should only be enrolled in schools where teachers are trained in SNE. This finding implies that majority of parents believes that most schools do not have teachers who are trained in SNE and therefore prefer not to enroll their children with ASD in schools. This finding justifies previous studies which revealed that most teachers are not trained in SNE (Busby et al., 2013; Hayes et al., 2013; Newton et al., 2014). Parents' beliefs that schools do not have trained teachers to teach their learners with ASD, is one factor that influences them not to take their children to school for educational interventions hence minimizing their educational accessibility.

As for training of teachers, 36 (90.0%) of parents indicated that more teachers should be trained in the area of ASD before children with ASD are enrolled in their schools. This implies that parents have not enrolled their children to school due their understanding that schools do not have specially trained teaches to handle them. Mohay and Reid's study (2007) revealed that appropriate teacher training is an indicator of effective behavior management in students with ASD. This study concurred with the study done by Spanna *et al* (2003) which stated that US parents feel that the staff needs to receive more education about autism training in how to teach these students. In order to better the needs of their children, most parents commonly named three ways; provide more education and training for school staff, provide more time for their child with a paraprofessional assistant and develop a stronger IEP (Starret al 2001). Temple (2012), stated that parents know their child best and should therefore take into account their child's strengths and challenges when deciding the right school for him/her to find the

best possible match. Most importantly they should make sure the staff at the school have the proper training and background and use instructional methods that are a good fit for your child's needs. In Great Britain according to Whitaker (2007) also indicated that parent's top priority for their children with ASD is on educational interventions for social skills.

Concerning parents' knowledge on where to take their children for educational intervention, 23 (57.5 %) and 11 (27.5%) strongly agreed and agreed respectively with the statement. This finding implies that majority of parents are not aware of schools where learners with ASD can be enrolled. Not knowing where to take their children with ASD for educational interventions means their children are not enrolled in school and they are therefore not accessing education. In Australia however, parents of children with ASD have a range of schooling options and it is up to them to look for the best and appropriate schooling for his/her child with ASD. The options in Australia are: main stream schools plus aids; special units within main stream schools; special schools for ASD; private independent schools and home schooling (The Australian parenting website, 2015). According to INTO (2014), parents need information about educational provisions for children with autism, including information on the curriculum and teaching methodologies and approaches. A range of services in Ireland exists to meet the varying needs of children and young people with autism spectrum (parson 2009), which is a contradiction to what happen In South Africa. In South Africa, according to Julie-Anne et al (2007), the situation is different as parents are ware a hand full of special schools catering for learners with autism and some remedial schools have established separate autistic units. According to Julie-Anne et al, the general teaching body in South Africa is

not fully supportive of the notion of including all autistic children into mainstream settings, only students with Asperser's thus leaving out other students on Autism Spectrum.

As for teachers having time, 32(80.0%) parents strongly agreed with the statement that teachers don't have time to prepare specialized materials for children with ASD while 7(17.5%) of parents agreed with the statement. This implies that almost all parents 39 (97.5%) believe that schools do not have teaching learning materials for learners with ASD since teachers do not have time to prepare them, a factor that make them see no need of enrolling their children in such schools.

Concerning schools to be given extra funds to buy specialized materials, out of 40 parents, 36 (90%) indicated that schools should be given extra funds to buy specialized materials for children with ASD. These findings implies that most parents do not take their children with ASD to schools due to the fact that schools do not have specialized learning materials and trained staff who are committed to their work.

The above two findings are a clear indication that parents have concerns about the school environment, a factor that influence them not to take their children with ASD to school thus hindering their educational accessibility. These Findings are consistent with the findings of (Hayes & Kemp, 2006; Kishinda & Kemp, 2011) which revealed lack of resources for example, insufficient time for teachers to plan instructional strategies, or insufficient special materials. In United Kingdom however, the Autism Education Trust (AET) was established in November 2007 with funding from the then department for children, schools and families. (Tony et al, 2011). The fund is dedicated to coordinating

and improving education support for all children on the autism spectrum in England. According to Tony *et al* (2011), the AET was awarded a government grant to develop a set of standards for the delivery of good practice in education provision for children with autism.

Parents were then asked if they have any comment on the education of learners with ASD.5 (12.5%) chose not to answer this particular question. Many parents 25 (62.5%) however stated that Children with ASD should not be put in the same class with children with mental handicaps since their needs are different. Majority also stressed that given attention from teachers, support staff and other stakeholders, children with ASD have potential of learning and benefiting from school.

One parent stated:

*I know my child is very clever and if handled well by teachers, he is able to learn and do well in academics even better than others.*

This views are supported by Dawson (2013) who stated that many people with ASD are highly successful even by society's standards, many going on to college and even becoming Nobel prize winners and therefore should not be treated as having mental handicaps and consequently being confined in mental handicaps schools.

Parents also expressed their view that teachers in public schools should be ready to accept children with ASD in their classes instead of turning them away. They further stated that they are usually forced to seek educational intervention for their children from private schools which are expensive to maintain hence retaining them at home.

One parent stated:

*My child was rejected by several administrators who said that they cannot contain him in class and school due to his inability to settle down and learn like others. I took him to a private school where I was unable to pay for him school fees and other services such as transport.*

Parents further recommended that children with ASD who are enrolled in private schools should also be provided with free primary education since they are not in those schools by choice but because most public primary schools do not enroll them. This finding justifies the funding practices in US where parents desire to place their children with ASD in private schools specifically dedicated to helping children with that disability. These private schools provide strong therapeutic interventions, tailored for children with autism and their tuition may sometimes be paid at least in part by local school district so long as the parents prove to the school district that no available public school can meet their children needs (Autism Society of America, 2015).

This finding concurs with Sessional paper No. 5 of (2012) which stated the following pertinent issues: shortage of specialized teachers and other support staff in the educational institutions to cater for learners with disabilities including those with ASD; children and youth with severe special needs continue to be excluded from schools due to the inability of regular schools to meet their physical and educational needs; Additional costs associated with children with disabilities such as medical treatment special diets and assistive devices raise the unit cost of special education; and that while the government subscribe to the policy of inclusion in education, and it acknowledges that integration of all children with special needs in regular training is professionally unachievable. Ann

(2004) indicated that in US as statistics continue to rise, regular classroom teachers face challenges for which they were never properly trained, and many feel that they are shortchanging their other students when they must cope with learning disabilities. The finding also concurs with Whitaker (2007).

Parents further stated that Children with ASD who cannot access education in schools because of their condition should be allowed to access education in their home. This finding concurs with Martins (2013). Martin indicated that in Australia parents have a right to choose home schooling for different reasons including distance from suitable school, religious or cultural values, or the particular academic or behavior needs of their child although with particular requirements to follow.

They also stated that there should be special schools for children with ASD where these children can be enrolled. According to UK government green paper for SEN, few autistic children ever have the opportunity to be educated in classrooms tailored to their needs, the choice is often whether the child is mainstreamed, or in a “general purpose special education classroom. In Kenya provision of educational services has often been skewed towards four traditional categories, that is hearing impairment, visual impairment, mental handicaps and physical handicaps (KNCHR 2007).

#### **4.3 Factors Affecting Perception of Teachers on Educational Accessibility of Learners with ASD**

The second objective of the study was to find out the factors affecting perception of teachers on educational accessibility of learners with ASD. Data regarding factors affecting perception of teachers on educational accessibility of learners with ASD in

Mombasa County was collected using questionnaires. Specifically the study aimed at finding out the knowledge, attitudes and views of teachers on educational accessibility of learners with ASD. Forty questionnaires were given to teachers who filled them and returned to the researcher. The return rate was 100% as all questionnaires were filled and returned back.

**Table 4.5 Knowledge of teachers on educational intervention for learners with ASD (n= 40)**

<b>Knowledge of ASD</b>	<b>Frequency</b>	<b>Percentage</b>
Cannot explain ASD	8	20.0
Can slightly explain ASD	20	50.0
Can explain ASD	11	27.5
Can fully explain ASD	1	2.5

Table 4.5 shows the summary of knowledge of teachers of educational intervention for learners with ASD. The table indicates that 8 (20%) and 20 (50%) of teachers understands less the educational intervention for learners with ASD. This implies that majority of teachers were less knowledgeable about ASD and the educational interventions for these learner. This finding is similar to the past research which revealed that teachers' lack a specific body of knowledge to the nature and needs of learners with ASD (Newton et al., 2014). Also another study adds that majority of teaching staff lacked a basic theoretical understanding of autism, most likely due to inadequate training (Lindsey, 2002). Another study by Christy (2004) indicated that most regular school teachers knows little about how to handle a child with autism since they do not

understand the characteristics of autism or knew which teaching methods would be effective. Teachers are very instrumental in the education of learners. If teachers lack knowledge of ASD education interventions, it may be difficult for them to address the educational needs of their learners which may lead to such learners dropping out of school or failing to progress academically thus hindering their educational accessibility.

**Table 4.6 Teachers having or not having children with ASD in their classes (n= 40)**

	<b>Frequency</b>	<b>Percentage</b>
Yes	9	22.5
No	26	65.0
No response	5	12.5

Table 4.6 shows that 26 (65%) of teachers did not have children with ASD in their classrooms. This finding implies that majority of teachers do not have children with ASD in their classrooms. This finding can be attributed to the fact that children with ASD are mainly placed in units where they have specific teachers to attend to them thus making it difficult for other teachers from the mainstream to attend to. This finding contradicts other findings which revealed that many learners with ASD are enrolled in mainstream schools where special education teachers and regular teachers interact with them (Tufvesson, 2015). Placing learners with ASD in special units limits their scope of interaction with other learners and other teachers in the school thus limiting their chances of progression hence dropping out of school.



**Table 4.7 Hours per day teachers teach, supervise or work with children with ASD  
(n= 40)**

<b>Duration in hours</b>	<b>Frequency</b>	<b>Percentage</b>
1-3	3	7.5
4-5	2	5.0
6 and above	3	7.5
Not known	32	80.0

Table 4.7 shows that 32(80%) of teachers do not teach, supervise or work with children with ASD. This may be attributed to the fact that most of them don't have these children in their classrooms. This finding justifies the fact that not all school system or classroom teachers are equipped with knowledge base that provide the environment needed for the learners with ASD (Daily, 2016). Not teaching, supervising or working with children with ASD among teachers implies that learners with ASD are usually left unattended to by teachers an action that hampers their academic progress which may lead to them dropping out of school thus limiting their educational accessibility.

Teachers were given statement to state their level of agreements or disagreement concerning the educational accessibility of learners with ASD. Their responses were summarized in Table 4.8

**Table 4.8: Teachers' level of agreements or disagreement concerning the educational accessibility of learners with ASD**

<b>STATEMENT</b>	<b>SA F (%)</b>	<b>A F (%)</b>	<b>D F (%)</b>	<b>SD F (%)</b>	<b>NS F (%)</b>
1. There are no schools to cater for learners with ASD in Mombasa County	21 (52.5)	17 (42.5)	1 (2.5)	0 (0.0)	1 (2.5)
2. Children with ASD drop out of school because they do not benefit from school curriculum	23 (57.5)	13 (32.5)	2 (5.0)	1 (2.5)	1 (2.5)
3. Children with ASD have challenging behaviors which make teachers unable to contain them in class	18 (45.0)	17 (42.5)	3 (7.5)	1 (2.5)	1 (2.5)
4. Learners with ASD require extra support from teachers to enhance their education	29 (72.0)	9 (22.5)	1 (2.5)	1 (2.50)	0 (0.0)
5. Teachers do not have extra time to prepare special learning materials for learners with ASD	26 (65.0)	4 (10.0)	3 (7.5)	5 (12.5)	2 (5.0)
6. Schools should be given extra funds to buy specialized learning provisions for learners with ASD	38 (95.0)	2 (5.0)	0 (0.0)	0 (0.0)	0 (0.0)
7. More teachers need to be trained in the area of ASD	33(82.5)	7 (17.5)	0 (0.0)	0 (0.0)	0 (0.0)
8. Children with ASD should only be enrolled in schools where teachers are trained	29 (72.5)	8 (20.0)	2 (5.0)	1 (2.5)	0 (0.0)

**KEY:**

*SA: Strongly Agree; A: Agree; D: Disagree; SD: Strongly Disagree; NS: Not Sure*

On whether there are schools to cater for children with ASD, 21 (52.5%) and 17 (42.5%) of teachers either strongly agreed or agreed with the statement that there are no schools to cater for learners with ASD in Mombasa County. This finding implies that according to teachers, there should be specific schools with specific teachers for learners with ASD. This understanding makes teachers who are in the available schools not to accept and attend to learners with ASD hence limiting their enrolment and retention. This finding is in agreement with the findings of Julie-Anne *et al* (2007) which showed that in South Africa, there were only a handful of special schools catering for learners with autism and some remedial schools were established separate as autistic units. According to Julie-Anne *et al*, the general teaching body in South Africa is not fully supportive of the notion of including all autistic children into mainstream settings, only students with Asperser's thus leaving out other students on Autism Spectrum.

On whether children with ASD drop out of school because they did not benefit from the curriculum, 23(57.5%) and 13(32.5%) of teachers either strongly agreed or agreed with the statement This implies that many teachers do not teach children with ASD using the available curriculum due to their believe that these children do not benefit from it and as a result such children are left unattended and in some cases forced to drop out of school hence limiting their educational accessibility.

On children with ASD having challenging behaviors, 18 (45%) and 17(42.5%) strongly agree and agree respectively with the statement that children with ASD have challenging behaviors which make teachers unable to contain them in classrooms. This implies that majority of teachers do not have knowledge and skills to handle learners with ASD in school and specifically in their classrooms and therefore believe that such children have

challenging behaviors which they cannot handle. This believes influence teachers participation in assisting learners with ASD to access education and as a result children with ASD end up not accessing education as it is expected. This finding concurs with the findings of Dorothy (2008). Dorothy stated that many teachers and support staff are unfamiliar with the needs of autistic children and struggled to teach them effectively failing to understand that the challenging behaviors can be accompanied by high intelligence.

According to Chris (2015), many education systems are significantly underperforming when it comes to catering for kids with disabilities, including autism as indicated by Australian Bureau of Statistics data. Chris (2015), indicated that 86 per cent of students on the autism spectrum report facing "difficulty" at school and the problem is that few teachers are not aware how to channel the strengths of children with autism. Their findings are similar to the findings of this study.

On extra support from teachers', 29(72%) of teachers indicated that they strongly agree with the statement that learners with ASD require extra support from teachers to enhance their education while 9 (22.5%) agreed with the statement. This finding is a clear indication that teachers believe that with extra support from teachers, education of children with ASD can be enhanced. Extra support for children with ASD is one of the things mentioned by Laura (2014) when she stated that although every child is unique, there are certain strategies that are often times of benefit to children with autism spectrum disorders, and there are things that you, as an educator, can do to increase the likelihood of your student's success in your classroom. Flynn (2010) also stated that teachers, who provide appropriate environments, employ proven behavior-management strategies, and

welcome students with reasonable but challenging expectations will see that students with ASD can make great gains in socialization, communication, and academic achievement.

Concerning schools to be given extra fund o buy specialized materials38 (95%) of teachers strongly agreed and 2 (5%) agreed that schools should be given extra fund to buy specialized materials. This finding implies that all teachers feel learners with ASD are not accessing education due to the fact that schools do not have specialized learning materials for them.

On teacher training, 33 (82.5%) strongly agreed, and 7 (17.5%) of teachers agreed that more teachers need to be trained in the area of autism. This finding implies that all teachers feel that there are only few teachers who are trained in the area of ASD making it difficult for many learners with ASD to be taught and properly handled while at school thus limiting their educational accessibility. This finding justifies the findings of The National autistic society of America (2016). According this society, thousands of autistic children are being let down each year because teachers aren't being given training they need. The findings also justify the findings of Geraldina (2015) that most of the primary school teachers had low knowledge about children with autism.

Table 4.8 also shows that 29 (72.5%) of teachers strongly agreed with the statement that children with ASD should only be enrolled in schools where teachers are trained in ASD. This finding implies that majority of teachers do not have confidence of teaching learners with ASD, may be due to lack of training or due to their teaching environment which they feel is not good for such learners, the move that locks out learners with ASD from

accessing education. This finding justifies the findings of Jason (2014) which indicated that Children with ASD are often left demoralized and anxious and feel picked on by their teachers due to their teachers not getting the required training to help them cope more effectively with the challenging concept of handling these unique personalities. Jason further stated that if all teachers received the appropriate level of training and support then all parties involved and most importantly the child would benefit.

Teachers were also asked if they have any commends on the education of children with ASD. Those who answered this particular question were 18(45%). Majority of teachers who answered this question stated that children with ASD need enough individual attention for them to benefit from the teachers instructions which is very difficult for teachers to do.

One teacher stated:

*We find it difficult to address their individual needs since we have many children in our classes to handle.*

Teachers also stated that the government should sponsor or allocate funds for children with ASD. They also indicated that there should be awareness creation to sensitize the entire community about ASD.

One teacher stated that medical professionals should also be actively involved for children with ASD to benefit from early education interventions. Some teachers also indicated that children with ASD should be handled by teachers who have interests, knowledge and skills in the area of ASD the finding that is similar to the finding of Flynn (2010)

Teachers also stated that parents with children with ASD should be trained on how to handle children with ASD at home.

One teacher said:

*Most parents of children with ASD do not seek proper advice on how to handle children their children at home, an act that gives teaches a lot of work when the child is brought to school. This is one of the reasons why teachers refuse to handle learners with ASD.*

Two participants indicated that there should be workshops and seminars for teachers and parents with children with ASD. Two teachers indicated that resource centers should be constructed specifically for children with ASD. They also indicated that vocational trainings need to be introduced for children with ASD. One teacher indicated that more doctors and educationists should do more research in the area of ASD. One participant also stated that parents should enroll their children with ASD in schools as they can benefit from concrete instructions given by SNE trained teachers.

#### **4.4 Factors Affecting Perception of Education Administrators on Educational Accessibility of Learners with ASD**

The researcher used direct interview to collect data from education administrators. The researcher approached education administrators on a one to one basis and asked them questions found on an interview schedule and wrote answers which she later analyzed.

Only Six out of the 12 head teachers who took part in this study, said that they had learners with ASD in their schools, whileout of the four education officers, only one said that he had learners with ASD in the Sub-County, the rest said that they didn't know whether they had such learners in the institutions within their County.

One Sub-County education officer stated that that:

*I can't exactly say whether there are children with ASD in my Sub-County or not since I don't understand who they are.*

However all the three EARC officers said without hesitation that they have learners with ASD in institutions in the County? When asked to state the number of children with ASD in their institutions, only one head teacher gave the exact number as five. The rest said that they don't have the exact number.

One head teacher said:

*I have left everything to do with SN to the teacher in- charge of the unit, I m not in a position to answer your questions since I don't even know what goes on there.*

This finding indicates that majority of education administrators did not have knowledge of the education of children with ASD and ASD in general and therefore did not understand the educational needs of children with ASD. Lack of ASD knowledge among education administrators implies that learners with ASD are not being provided with education as is required. The finding of this study concurs with the finding of the study by Leslie (2007) which indicated that many school administrators, teachers, and other staff members had received little education on the specific educational needs of individuals with Autism Spectrum Disorders.

Participants were then asked to say the kind of programs available for children with ASD in their schools, zones, and sub-counties and county, out of the twelve head teachers, only one stated that he had a specific educational program for learners with ASD in the school



One head teacher said that:

*We have a different education program for learners with ASD in our school where they do different activities at a given time.*

Other Education officers mentioned the following as education programs for learner with ASD; activities of daily living skills and social skills such as play; sensory integration program and special tuition; vocational trainings and special schools and units for children with mental handicaps where learners with ASD are also enrolled. This finding indicates that most education administrators aren't aware of education programs that are there in the County. This finding is consistent with Danna's (2012) study which was carried out in US that indicated that children with ASD do not have specific educational programs and that while some children with autism attend special schools-both public and private- the prevailing winds are definitely blowing in the regular public school direction.

Participants were also asked if learners with ASD should be provided with education just like others. All of the participants were in agreement. This finding implies that education administrators feel that children with ASD should be provided with education.

Concerning the settings in which they feel children with ASD should be provided with education, participants gave varied responses. However, a few trends ran through their responses, out of the 20 participants six head teachers said that they should be provided education in any special school but with necessary facilities; two said that children with ASD should be in special schools specifically meant for them. Three head teachers said

that it should be in regular or integrated schools while three argued that it depends with the severity of the condition of the child.

Another head teacher said that:

*Children on ASD have individual differences and it is proper for them to be placed in different settings that address their needs.*

This finding implies that education administrators do not have specific education setting for children with ASD and therefore feel that children with ASD can access education in any of the educational programs available. This finding can be attributed to the fact that most of them didn't have knowledge of ASD. This finding compliments the findings of Donna et al (2007) which revealed that with increased incidence of ASD many public school districts are keeping students with autism in their public school district rather than sending them to specialized schools. Individuals with autism are frequently found today in regular education classrooms right alongside their typically developing peers. According to Donna (2007) Students with autism who require greater support are educated in the public school environment in self-contained classrooms.

When asked if children with ASD should be enrolled in schools and units for children with mental handicaps, participants also had different opinions. All the four Sub-County education officer said that they didn't see any problem with them being enrolled in such schools since those schools have trained teachers to handle them. Six head teachers stressed the need of having specific schools for children with ASD since most of the settings available cannot address their specific needs. Three head teachers further added that not all children with ASD have mental handicaps and some may fit in other settings

such as regular schools. This finding implies that most of education administrators were not aware of where to place children with ASD for educational interventions.

When asked if learners with ASD can learn up to KCPE to secondary, majority of participants weren't sure. However, four head teachers said that it is possible with proper intervention. Two head teachers said that it depends with the ability of the child as some of them are even academically okay. Participants when asked if learners with ASD can learn beyond class three, majority of participants weren't sure of whether they can or they can't. This finding is an indication that most education administrators do not understand education abilities of children with SD. However there is evidence that more and more people with disabilities are going to university this finding is similar to the finding of autism speaks (2015).

Education Administrators were also asked to say the type of programs that should be made available for children with ASD. In their responses, participants also gave varied answers. Some said regular schools, others said special schools specifically for them, and few said vocational training schools while majority said schools for children with mental handicaps. This finding matches Talia et al (2015) finding which indicated that with increased incidence of ASD many public school districts are keeping students with autism in their public school district rather than sending them to specialized schools. Individuals with autism are frequently found today in regular education classrooms right alongside their typically developing peers. Students with autism who require greater support are educated in the public school environment in self-contained classrooms.

When asked if learners with ASD should be made to repeat grades until they are at par with others, most participants were not for the opinion. Only one participant said that they need to repeat. One of them further added that they should repeat since they can't be promoted when they have not gained certain skills. For those participants who said that they should not repeat, some of them further added that children with ASD will never be at par with others and therefore there is no need for them to be made to repeat. Another participant added that forcing them to repeat may make them hate schools and therefore drop out. Four participants also added that it is against the government's regulation to force any child to repeat a grade. This finding indicates that majority of participants do not support retention of children with ASD in any particular class and therefore do not support repeating. This finding complemented Rightsle's (2008) views which indicated that repeating grade with no changes in supports or how the instruction is delivered have the effect of not working.

On policy issues, all participants agreed that the government should have policy on the education of learners with ASD. 3 (15%) of participants further added that there should be a clear guideline on how children with ASD should access education. This finding implies that most of education administrators believe that there is no clear policy on the education of learners with ASD. This finding compliments the study by Wilkinson et al (2010) who recommended that schools and education authorities in UK were required to develop their cultural policies and practices towards achieving an inclusive education environment which will accommodate learners with diversify needs including those with ASD

Concerning learning materials, all the participants agreed that teachers who handle children with ASD should be provided with enough time to prepare learning materials and at the same time be provided with appropriate physical learning facilities. This finding is consistent with Chambers statement of (2008) which stated that teachers need administrator support, professional development, time with their students and connections to resources and materials. Meyer and Lee (1994) sighted teachers' lack of time as one of the problems hindering implementation of educational programs for learners with ASD.

All the Education Administrators agreed with the statement that more teachers can be trained in the area of ASD. This finding is a clear indication that most teachers are not trained in the area of ASD. This finding concurs with the findings of Rosenzweig (2009). Rosenzweig stated that University programs need to give training and experience to educators of learners with ASD since educators can only understand how to differentiate instructions if they are given specific strategies and techniques that can be used for various types of students. The findings of this study also concurs with findings of the study by Fazil and Sulman (2014) whose results revealed that in although there are different diagnostic and therapeutic services available for children with autism in Pakistan, there is lack of qualified teachers, accessible building and pick and drop facilities for children with autism.

4 of the education administrators who acknowledged having children with ASD in their institutions were in agreement with the statement that having these learners is a considerable challenge. This finding matches that of Lopt et al (2010) when they stated that often in school environments, staff and administration are faced with challenging

behaviors of individuals with ASD, as well as other students. The authors stress the importance of providing training in behavior management to all staff members who are involved with the learner, discuss the value of teaching staff to manage a behavioral crisis, and highlight the use of proactive strategies to reduce problem behavior. Fran (2008) in his article 'Educators Real with the Growing problem of Autism' stated that in US, students with ASD are more likely than other special need students to receive out-of-district placements. The article states that In fact almost every student at almost every leading private school for autism, including the New England Children's Center, New Jersey's, and the Virginia Institute, attend at public expense. Still, the vast majority of autistic students go to public schools. Many parents devote their lives to making sure their son or daughter's school delivers the services spelled out in the child's IEP, the all-important document that drives the education of every disabled student.

When asked if learners with ASD require extra support from teachers to enhance their education, all Education Administrators agreed. This finding concurs with Lara's view of (2011). Lara stated that the school needs to ensure that supports are put in place to help children with ASD deal with challenges they face in being part of school setting. This finding explains why in Australian state education systems support students with additional needs, although not all children diagnosed with autism spectrum disorder (ASD) are entitled to funding. If your child is entitled the funding usually goes to the school to support your child's additional learning needs. Government and non-government schools get different support according to Australian parenting website.

When asked if learners with ASD can use the same curriculum as those with mental handicaps, the participants gave varied answers. Majority of the participants weren't sure of what to say. For those who answered this question, most of them agreed with the statement. Only 4(20%) said that they should use the curriculum specifically meant for them. NAP (2015), stated that autism spectrum occurs along with mental retardation disorders in many cases and therefore educational planning must address both the needs typically associated with autistic disorders and need associated with accompanying disabilities. .

When asked if parents of children with ASD do not want their children to go to school, 11 of the Education Administrators didn't have an answer to that. This answer might be attributed to the fact most of these participants weren't sure because they had not come across parents of children with ASD.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Summary of Findings

The findings of this study were summarized with reference to the research objectives.

##### **5.1.1 Factors Affecting Perception of Parents on Educational Accessibility of Learners with ASD.**

The study found out that perception of parents on educational accessibility of learners with ASD is affected by, lack of academic progress, lack of knowledge about ASD 25 (62.5%), lack of trained teachers 35 (87.5%) and lack of specialized learning materials 39 (97.5).

##### **5.1.2: Factors affecting Perception of Teachers on Educational Accessibility of Learners with ASD**

The study found out that perception of teachers on educational accessibility of learners with ASD is affected by lack of knowledge on ASD 28 (70.0%), lack of schools for learners with ASD 38 (95.0%), lack of appropriate curriculum 36 (90.0), lack of training 40 (100) and lack of time to make specialized learning materials 38 (95.0).

##### **5.1.3 Factors affecting Perception of Education Administrators on Educational Accessibility of Learners with ASD**

The study found out that perception of education administrators is affected by lack of knowledge about ASD and lack of clear Policies to govern education of children with ASD.



## **5.2 Conclusions**

The following conclusions were therefore made based on the objectives of this study

### **5.2.1 Factors affecting Perception of Parents on Educational Accessibility of Learners with ASD**

The conclusion of this study is that parents have not taken their children to school due to the following factors that affect their perception on educational accessibility of learners with AS: lack of academic progress among their children; lack of knowledge of ASD; lack of trained teachers and lack of specialized learning materials.

### **5.2.2 Factors affecting Perception of Teachers on Educational Accessibility of Children with ASD**

The conclusion of this study is that although teachers want children with ASD to be enrolled in schools, they are not ready to handle them due to lack of ASD knowledge; lack of schools; lack of time to prepare learning/ teaching materials; lack of ASD specific curriculum; lack of training and lack of funds to buy learning/ teaching materials.

### **5.3.3 Factors affecting Perception of Education Administrators on Educational Accessibility of Learners with ASD**

The conclusion of this study is that education administrators lacked ASD knowledge and lacked knowledge of clear policies that govern the education of learners with ASD, factors that affects their perception thus making it difficult for them to provide the learning environment in terms of trained teachers, teaching and learning materials as well as proper leadership.

### **5.3 Recommendations**

The following are the recommendations of this study based on the findings of this study:

#### **5.3.1 Factors affecting Perception of parents on educational accessibility of learner with ASD**

Based on the finding that parents had lacked knowledge about ASD, this study recommends that awareness be created to equip the parents with ASD knowledge. Based on the findings that schools lacked trained teachers and specialized learning materials, this study recommends that schools be provided with ASD trained teachers as well as specialized learning materials for children with ASD.

#### **5.3.2 Factors affecting perception of teachers on educational accessibility of learners with ASD**

Based on the finding that teachers lacked knowledge of ASD, This study recommends that teachers be made aware of educational needs of learners with ASD and consequently be trained on how to address specific needs of such learners. This will help them to design their teaching with the learner in mind hence retaining them in school thus ensuring their educational accessibility.

#### **5.3.3 Factors affecting perception of education administrators on educational accessibility of learners with ASD**

In view of the finding that education administrators hardly understood ASD, there is need to create awareness among education administrators on ASD and its unique characteristics. This will help them allocate appropriate time and teaching learning resources for learners with ASD. On the finding that education administrators believed

that there is no clear policy to guide education of learners with ASD, this study recommends that the ministry of education come up with a clear policies to guide the education of learners with ASD.

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## APPENDICES

### APPENDIX A: PARENTS' QUESTIONNAIRE

Questionnaire identification

#### **INTRODUCTION:**

I am a master of education student in the department of special needs education at Maseno University. I am going to administer questionnaires to parents of learners with ASD in Mombasa County to establish perception of parents on educational accessibility of learners with ASD in Mombasa County-Kenya.

#### **CONFIDENTIALITY AND CONSENT:**

I am going to ask you some very personal questions that can only be answered by you as a parent of a child with ASD. Your name will not be written on this form and will never be used in connection with any of the information you will give in this form. You do not have to respond to any question that you do not want to answer. However I would be happy if you could answer all questions since your answers will help the researcher understand better the parents' views, knowledge, and attitudes towards the educational accessibility of learners with ASD in Mombasa County. I would greatly appreciate your response to this study.

#### **SECTION 1: PARENTS' DEMOGRAPHIC INFORMATION.**

Put a tick where appropriate,

1. Is your child in school? Yes ( ) No ( )
2. If your child is not in school, give reasons
3. At what age was your child when he/she was diagnosed with ASD? ( ) Age in years
4. Where was your child referred to after assessment?

5. How much do you know about autism? (a) Can explain Autism (b) can hardly explain Autism (c) cannot explain Autism

**SECTION II:**

In this section you are provided with statements. Please indicate with an X if you strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), Not Sure (NS)

SN	STATEMENT	SA	A	D	SD	NS
1	My child Should only be enrolled in schools where teachers are trained in SNE					
2	I am not aware of where to take my child with ASD for educational interventions in Mombasa County					
3	More teachers should be trained in the area of autism before children with ASD are enrolled in their schools					
4	Teachers do not have time to prepare specialized teaching Learning materials for learners with ASD					
5	Schools should be given extra funds to buy specialized materials for learners with ASD					

Do you have any comment or recommendation to make regarding education of your child?



## **APPENDIX B: TEACHERS' QUESTIONNAIRE**

### **INTRODUCTION**

I am a master of education student in the department of special need education at Maseno University. I am going to interview lower primary teachers in schools and units for learners with MH where learners with ASD are also enrolled to establish perceptions of teachers on educational accessibility of learners with ASD in Mombasa County- Kenya.

### **CONFIDENTIALITY AND CONSENT**

I am going to ask you some very personal questions that can only be answered by you as a teacher in a school unit where learners with ASD are enrolled. Your name will not be written on this form and will never be used in connection with any of the information you will give in this form. You do not have to respond to any question that you do not want to

Answer. However your answers will help the researcher understand better the teachers' views, knowledge and attitudes towards the educational accessibility of learners with ASD in Mombasa County. I would greatly appreciate your response to this study.

**SECTION1: TEACHERS’ DEMOGRAPHIC INFORMATION.**

Please tick where appropriate

1. Your professional qualification P1 ( ) Diploma ( ) Degree ( ) other ( )
2. Compared to other teachers in this school, how much can you explain ASD?
3. Do you have children with ASD in your class? Yes ( ) No ( ). If yes, how many hours per day do you teach, supervise or work with them?

**SECTION II:**

In this section you are provided with statements. Please indicate with an X if you; Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD), Not Sure (NS)

SA	STATEMENT	SA	A	D	SD	NS
1	There are no schools to cater for learners with ASD in Mombasa County					
2	Children with ASD should only be enrolled in schools where teachers are trained in SNE					
3	Children with ASD drop out of school because they do not benefit from the school curriculum					
4	Children with ASD have challenging behaviors which make teachers unable to contain them in classrooms					
5	Learners with ASD require extra support from teachers to enhance their education					
6	Teachers do not have extra time to make special learning materials for learners with ASD					
7	Schools should be given extra funds to buy specialized learning provisions for learners with ASD					
8	More teachers should be trained in the area of ASD					

**APPENDIX C: INTERVIEW SCHEDULE FOR EDUCATION  
ADMINISTRATORS**

1. Do you have learners with ASD in your school, Zone, Sub-County, County?
2. If yes, how many
3. What kinds of programs are available for learners with ASD in your school, Zone, Sub-County, County?
4. Should children with ASD be provided with education? If yes where?
5. Should children with ASD be enrolled in schools for learners with mental handicaps?
6. Should learners with ASD be enrolled in schools with SNE teachers?
7. Can learners with ASD learn through primary up to secondary?
8. What kind of programs should learners with ASD be enrolled in?
9. Should learners with ASD be made to repeat grades until they are at par with others?
10. Do you think it is necessary for the government to have policies on the education of children with ASD?
11. Do you think administrators should provide sufficient support to teachers who handle learners with ASD?
12. Do you think teachers who handle learners with ASD should be provided with enough time to prepare learning materials for learners with ASD?
13. Should schools where learners with ASD are enrolled be provided with appropriate physical facilities and learning materials?
14. Should more teachers be trained in the area of ASD
15. Do you think having learners with ASD in your school, Zone sub-county, County as a considerable challenge for teachers need specific and extraordinary support?
16. Do you think learners with ASD require extra support from teachers to enhance their education?
17. Should learners with ASD use the same curriculum as those with mental handicaps

APPENDIX D: MAP OF THE STUDY AREA

