

Availability, accessibility, and effectiveness of education programs for learners with autism in Kenya

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ABSTRACT

Autism spectrum disorder presents a wide spectrum of cognitive and behavioural profiles, implying that educational interventions must be highly individualized and multidisciplinary in nature. While Kenya has made strides in autism awareness and the implementation of Competency-Based Curriculum (CBC), research evidence has predominantly focused on general education of learners with disabilities, with minimal attention specific to autism. This study sought to examine the availability, accessibility, and perceived effectiveness of education programs for children with autism in Kenya, with a focus on how these programs support academic, social, and adaptive development. The study was guided by the Ecological Systems Theory, and utilised an exploratory study design. A mixed-methods approach was employed, involving quantitative surveys with parents of children with autism and qualitative interviews with teachers, and Curriculum Support Officers in charge of Special Needs Education (CSO-SNE). Exploratory descriptive analysis and thematic analysis approaches were utilised in data analysis. Findings revealed that current education programs of learners with autism are more effective in supporting learners' social, adaptive and behavioral domains than the academic achievement. Results further reveal that while most children on the autism spectrum attend inclusive and/or integrated schools, autism-specific programs remain limited and unevenly distributed. Accessibility is hindered by household financial constraints, inadequate teacher training, and limited therapy support. The study concludes that there exists critical availability, accessibility and effectiveness gaps in the implementation of inclusive education under CBC. The study recommends the need for autism-sensitive curricula, multidisciplinary support services, expanded training for teachers, and targeted policy reforms. This study contributes original empirical evidence on the current state of autism education in Kenya and offers a rare integration of parent, teacher, and curriculum support officer perspectives aligned with the CBC framework.

Keywords: Autism Spectrum Disorder, Competency-Based Curriculum, Educational Accessibility, Inclusive Education, Special Needs Education

I. INTRODUCTION

Autism Spectrum Disorder (ASD) is a complex neurodevelopmental condition characterized by impairments in social communication, repetitive behaviours, and restricted interests (Roehr, 2013). With an estimated global prevalence of 1 in 100 children by the World Health Organisation (WHO, 2023), ASD presents diverse challenges that necessitate individualized support, particularly in educational settings. For children with autism, access to inclusive, responsive, and well-resourced education programs is critical for fostering not only academic learning but also social development and adaptive functioning (Odom et al., 2010). In some high-income countries, considerable progress has been made in designing structured early intervention programs, inclusive classroom models, and individualized educational plans (IEPs) tailored to the unique needs of autistic learners (Price, 2018; Vargas-Baron et al., 2019). However, in most low- and middle-income countries (LMICs), such as Kenya, these services remain largely underdeveloped or inaccessible, despite growing awareness and policy reforms.

Kenya has made strides toward inclusive education, including the introduction of the Competency-Based Curriculum (CBC). The efforts made emphasize learner-centred approaches, flexible learning pathways, and skill development over rote memorization (Heto et al., 2020; Wanjohi, 2017). Within this curriculum, two progression tracks - the age-based and stage-based pathways were introduced to accommodate learners with diverse developmental needs (Wanjohi, 2017). While the age-based curriculum prioritizes academic progression aligned with chronological age, the stage-based curriculum is designed to support learners with severe disabilities, including those on the autism spectrum, by offering functional, life skills-oriented content. This shift reflects an evolving national commitment to equity and inclusion, as outlined in Kenya's Education Sector Policy for Learners and Trainees with Disabilities (Republic of Kenya, 2018). However, despite these advancements in policy, there is limited empirical evidence on how these

programs are operationalized for children with autism and whether they are achieving the intended outcomes of academic and social inclusion.

Existing research in Kenya has predominantly focused on general special needs education, with minimal attention given specifically to autism (Gona et al., 2016; Kiarie, 2018; Mbugua, 2016). Moreover, where autism is mentioned, it is often grouped under intellectual or developmental disabilities (Gona et al., 2016; Khabala, 2018; Samia et al., 2020), thus obscuring the unique needs and experiences of learners on the spectrum. This oversight has implications for curriculum design (Muzata, 2017), teacher training (Ikao et al., 2024; Khasakhala, 2016), school placement (Manukwana, 2020), and resource allocation (Kairu et al., 2024; Musa, 2022). ASD, unlike many other disabilities, presents a wide spectrum of cognitive and behavioural profiles, meaning that educational interventions must be highly individualized and multidisciplinary in nature (Lord et al., 2020; Wright et al., 2020). Without a clear understanding of how current education programs are structured and experienced by learners with autism and their families, efforts toward inclusive education risk falling short of their intended goals. Furthermore, piecemeal evidence and isolated studies suggest that parents of children with autism face multiple barriers in accessing quality education, including lack of trained personnel, financial constraints, stigma, and geographic disparities in service availability (Gona et al., 2016; Kiambati et al., 2025; Masaba et al., 2021). These challenges point to the need for a more systematic and context-sensitive understanding of how education systems can better accommodate the diverse needs of learners with autism.

1.1 Research Questions

- 1) What types of education programs are available for children with autism in Kenya?
- 2) To what extent are education programs for children with autism accessible in Kenya?
- 3) To what extent are existing education programs effective in supporting the academic achievement and social development of children with autism?

II. LITERATURE REVIEW

2.1 Theoretical Review

This study adopted the Ecological Systems Theory, developed by Urie Bronfenbrenner in 1979, that a child's development is influenced by multiple layers of environmental systems, all interacting with each other and the individual over time. These layers are microsystem, mesosystem, exosystem, macrosystem and chronosystem. The microsystem level refers to the immediate environments—such as family, school, and peers—where individuals directly interact and develop. At this level, families of children with ASD often struggle within the home and school microsystems due to limited support. Teachers, even those willing to help, often lack specialized training, which affects the teacher–child interaction quality in the classroom (Abubakar et al., 2022b). A single teacher might have a class of 40+ students with one or two autistic children and no aide, making individualized attention scarce. Consequently, the daily classroom experience of a Kenyan child with autism might involve misunderstandings or unmet needs (Abubakar et al., 2022b).

The mesosystem level refers to the connections and interactions between different microsystems, such as between a child's family and their school. At this level, linkages are relatively weak or fragmented. There is little formal structure to connect parents with schools beyond basic communication. According to a report by the United Nations Educational, Scientific and Cultural organization, many parents reported feeling excluded from decision-making in their child's education. They may simply be informed of placement in a special unit rather than actively planning interventions with teachers (UNESCO, 2021a). In Kenya, Educational Assessment and Resource Centers (EARCs) attempt to bridge the coordination between the education system and other services by involving multi-professional teams (teachers, social workers, medical workers) to assess and place children. However, EARCs still grapple with massive funding and staffing challenges (Ayabei, 2020).

The exosystem level refers to external settings that indirectly influence an individual's development, such as a parent's workplace or education policies. At this level, funding for special needs education is limited. Many programs for ASD in Kenya rely on donors and NGO initiatives. The Kenyan public education system is stretched even for general needs; thus, dedicated funding for accommodations or specialized staff is minimal (Alshoura, 2023). Challenges at this level means that a public school cannot hire paraprofessionals, buy assistive technology, or secure consultation services for autism if needed.

The macrosystem level refers to the broader cultural, societal, and ideological contexts that shape an individual's experiences and development. Kenya is characterized by emerging awareness but also enduring stigma and limited prioritization of disability issues. Culturally, disabilities in Kenya have historically been misunderstood (Bunning et al., 2017; Thuo & Kioko, 2023). For instance, some traditions attribute disability to curses or divine punishment, leading to stigma. These factors have the potential to discourage families from seeking help or asserting their rights, and communities from fully including these children. However, this is gradually changing: advocacy and visibility of ASD

in Kenya is increasing, with efforts such as Autism Awareness campaigns and involvement of influential figures helping to shift attitudes (Oranga et al., 2022).

The chronosystem level refers to the dimension of time, capturing how life events, transitions, and historical changes influence an individual's development. Autism awareness and services started from a very low base relatively recently. Twenty years ago, autism was barely recognized in Kenyan education; today there is at least acknowledgement and some policy (e.g.) in place (Cohen, 2012; Masaba et al., 2021).

2.2 Empirical Review

2.2.1 Availability and Accessibility

Globally, the availability of education programs for children with autism spectrum disorder (ASD) has increased over the past few decades due to stronger legal protections, expanded diagnosis, and growing public awareness (Kiarie, 2018; Kouvonen et al., 2022; Page et al., 2024; Reed et al., 2012). In many educational systems, there are legal mandates requiring that public schools identify and serve children with autism. Despite this progress, the capacity of these systems is often strained by rising prevalence rates of ASD and limited resources (Alshoura, 2023; Reed et al., 2012). Specialized programs may be concentrated in urban centres or well-funded regions, leading to regional disparities (Durkin et al., 2017). In well-resourced settings, children with ASD often have access to autism-specific classrooms, support staff, and therapies integrated into their educational experience. However, even in such systems, there remains significant challenges in ensuring all children receive the appropriate support based on their unique needs.

Early intervention programs are a cornerstone of service availability, with structured support for children showing ASD symptoms (Dunst et al., 2014; Kairu et al., 2024). However, availability does not always guarantee universal access (Muzata, 2017). Reports from various contexts reveal that specialized placements, such as autism units or inclusive mainstream settings with trained staff, often have long waiting lists or limited slots, reflecting systemic capacity constraint (Morin et al., 2022; Rivard et al., 2017). While policy frameworks may exist to support availability, the practical rollout of these policies can vary widely (Merritt, 2024; Smith et al., 2020). Even where autism is legally recognized as a special educational need, children with ASD may be misclassified or placed in programs designed for other disabilities (Reed et al., 2012).

Geographical disparities further limit access, especially in rural or under-resourced areas. In such regions, families may have only one schooling option, which may not be equipped to handle learners with ASD. Families report turning to home-schooling or transferring children between schools in search of better support (Channey-White, 2021; Fadare et al., 2021). Social and cultural dimensions of accessibility are increasingly recognized. For instance, stigma surrounding autism, lack of community awareness, and bureaucratic complexity in securing support can deter parents from enrolling their children or advocating for necessary services (Gervacio & Xhomaqi, 2025).

In Kenya, the availability of education programs for children with autism is limited (Kiarie, 2018; Wamburu et al., 2021). While the government recognizes autism under its Education Sector Policy for Learners and Trainees with Disabilities (2018), implementation lags behind policy. The number of schools offering autism-specific services is small relative to national need, and many public schools lack the trained staff, materials, and infrastructure to support inclusion. Where programs exist, they are inaccessible to most families due to cost or location (Wamburu et al., 2021). In practice, many children with autism are either kept at home or placed in inappropriate learning environments, such as general special units that do not cater specifically to their needs. Teachers often face challenges managing children with diverse functional abilities in large, under-resourced classrooms (Manukwana, 2020).

Access to early intervention, which is critical for long-term educational outcomes, is also limited. Families often report long waiting times for diagnosis and minimal access to services such as speech or occupational therapy within the public education system (Masaba et al., 2021; Mbugua, 2016; Thuo & Kioko, 2023). Non-governmental organizations and private initiatives offer some services, but these only reach a small proportion of the population (Masaba et al., 2021). Access to appropriate education for children with autism in Kenya is shaped by a combination of structural, economic, and systemic barriers, which undermine both the intent and impact of inclusive education policies (Thuo & Kioko, 2023). The challenges mirror global trends but are often more pronounced due to resource constraints and uneven policy implementation. This paper leverages lived experiences of parents, teachers and curriculum support officers to understand the availability and accessibility of education programs for children with autism in Kenya.

2.2.2 Effectiveness and Outcomes

Inclusive education programs have shown mixed levels of effectiveness for children with autism, with significant variation depending on how well they are resourced and implemented (Cohen, 2012; ECEC, 2022; UNESCO, 2023). In well-supported models, inclusive classrooms that incorporate trained staff, individualized plans, and flexible support structures have enabled learners with autism to participate meaningfully in mainstream settings (Cumming et al., 2024; Kouvonen et al., 2022). In such settings, students often report a stronger sense of belonging, and families express high levels of satisfaction. However, across systems, a consistent challenge is variation in implementation

quality (Chu & Jhuo, 2023; Muzata, 2017). The success of inclusive education, therefore, heavily depends on factors such as teacher preparedness, school culture, classroom flexibility, and availability of individualized supports (Shaw, 2023; Sivola et al., 2024).

The timing and intensity of intervention play a critical role in determining educational outcomes for learners with autism (Ikao et al., 2024; Odom et al., 2010; Sivola et al., 2024). Early intervention programs, especially those initiated soon after diagnosis and delivered consistently (e.g., 20+ hours per week), have been linked to improved school readiness, language development, and adaptive behaviour (Whitehouse et al., 2021). Access to early therapy services, including behavioural support, speech and language therapy, and occupational therapy, is a strong predictor of later school success for autistic children (Dimian et al., 2021).

Systems that emphasize early diagnosis, reduced wait times, and coordinated entry into preschool special education or early years programs tend to report more favourable outcomes (Bassam & Tork, 2019). These outcomes are particularly noticeable in adaptive functioning and foundational academic skills. Conversely, children who experience delays in service access often enter school with more pronounced challenges (Dimian et al., 2021). Thus, the effectiveness of education programs is closely linked to the broader ecosystem of early childhood support services (Andrade et al., 2024).

Another key determinant of the effectiveness of education programs as brought out in literature is the capacity of schools to provide sustained and specialized support (Chu & Jhuo, 2023; Manukwana, 2020). Many students with autism continue to face disrupted educational trajectories due to resource shortages (Alshoura, 2023; Merritt, 2024). Teacher burnout, overcrowded classrooms, and inadequate training further undermine the success of inclusion efforts. While many education systems show strong policy commitment to inclusion and evidence-based practice, effectiveness remains highly variable across schools and regions. Common obstacles include teacher shortages (Khasakhala, 2016), delayed diagnoses (Andrade et al., 2024), limited specialist availability (Fadare et al., 2021), and insufficient training (Dawson-Squibb et al., 2020). This paper explores perceived effectiveness of education programs for children with autism

III. METHODOLOGY

3.1 Study Design

This was an exploratory mixed methods study that utilized both qualitative and quantitative research approaches to generate evidence on education of learners with autism, with a focus on availability, accessibility and effectiveness of education programs for children with autism in Kenya. The integration of descriptive statistics and thematic qualitative analysis provided an in-depth insight of both systemic patterns and lived experiences. The integration of descriptive statistics and thematic qualitative analysis provided an in-depth insight of both systemic patterns and lived experiences

3.2 Study Setting

The study was conducted in Nairobi and Kiambu Counties in Kenya. The two counties were purposely selected, with Nairobi representing the urban setting, while Kiambu represented the semi-urban and rural settings.

3.3 Participants

The study targeted parents of children with autism, teachers, and curriculum support officers in charge of special needs education. Yamane (1967) formula for sample size determination was used to select parents for the quantitative survey, while purposive sampling was used to select participants for the qualitative component. The study participants consisted of: a) Parents/caregivers of children with ASD (N = 195), who responded to a structured questionnaire capturing demographic information and perceptions of their child's educational experiences, and (N=11) who participated in focus group discussions; b) Key Informants (N = 9) drawn from two stakeholder groups: i) Teachers working in inclusive or special education settings for children with autism (N=5); and ii) Curriculum Support Officers for Special Needs Education (N=4).

3.4 Research Instruments and Data Collection

A structured questionnaire was administered to parents of children with ASD to collect data on education programs. In addition, focus group discussions were conducted with selected parents in order to gain deeper insights from parents' experiences in education provision for children with autism. Key informant interviews were conducted with teachers of children with autism, and CSOs-SNE. The KIIs were intended to collect additional data bringing in the different points of view on availability, accessibility and effectiveness of education programs for learners with autism.

3.5 Data Analysis

Quantitative analysis: Descriptive statistics were computed using STATA software. Frequencies and percentages were used to summarize parent-reported outcomes across various dimensions of educational experience (e.g., achievement, accessibility, school type). **Qualitative analysis:** Qualitative data from interviews were analysed using Braun and Clarke's (2006, 2013) thematic analysis approach, which consists of six distinct phases: Familiarization with the data: The researcher read and re-read interview transcripts to get an overall understanding of the content.

Generating initial codes: Key statements and patterns relevant to the research questions were systematically organized and coded into broadly related concepts. Searching for themes: Coded data were examined for overarching patterns or specific themes related to the availability, accessibility, and effectiveness of education programs. Reviewing themes: Emerging themes were refined by comparing across multiple transcripts to attain coherence and consistency. Defining and naming themes: Final themes were clearly defined and labelled to reflect the specific sub-issues emerging from the data (e.g., teacher capacity, infrastructure gaps, parental denial). Producing the report: The final themes were structured and illustrated with thick descriptions (i.e., direct quotes from participants)

3.5.1 Triangulation and Corroboration

Themes emerging from qualitative interviews were corroborated and triangulated with quantitative data from the parents' survey. This allowed for the validation of patterns such as the mismatch between program availability and accessibility and provided better insights into the factors influencing educational experiences for children with ASD.

3.6 Ethical Considerations

The study protocol was submitted for review by the APHRC Scientific Review Committee (SRC) to ensure it met the scientific rigor and adherence to ethical principles. The study protocol was then submitted for review by the African Medical and Research Foundation's Ethics and Scientific Review Committee (AMREF-ESRC) and approved under protocol Ref. No. AMREF - ESRC P1767/2024. A research license was then obtained from the National Commission for Science, Technology, and Innovation (NACOSTI).

Before data collection, information about the study was explained to the respondents, consent sought, and consent forms signed. All the investigators completed the - National Institute of Health (NIH) web-based course on protecting human research participants. In addition, all the field staff were trained on research ethics, disability etiquette and the APHRC guidelines for working with study participants. Participation in the study was voluntary, and no coercion was used. In addition, the risks and benefits of the study were described to the study participants. Moreover, all data sets were anonymized to protect the identity of respondents.

IV. FINDINGS & DISCUSSION

4.1 Findings

4.1.1 Availability of Education Programs

Quantitative results show that 58% of children with autism attend age-based pathways, while 42% attend stage-based pathways as presented in Figure 1.

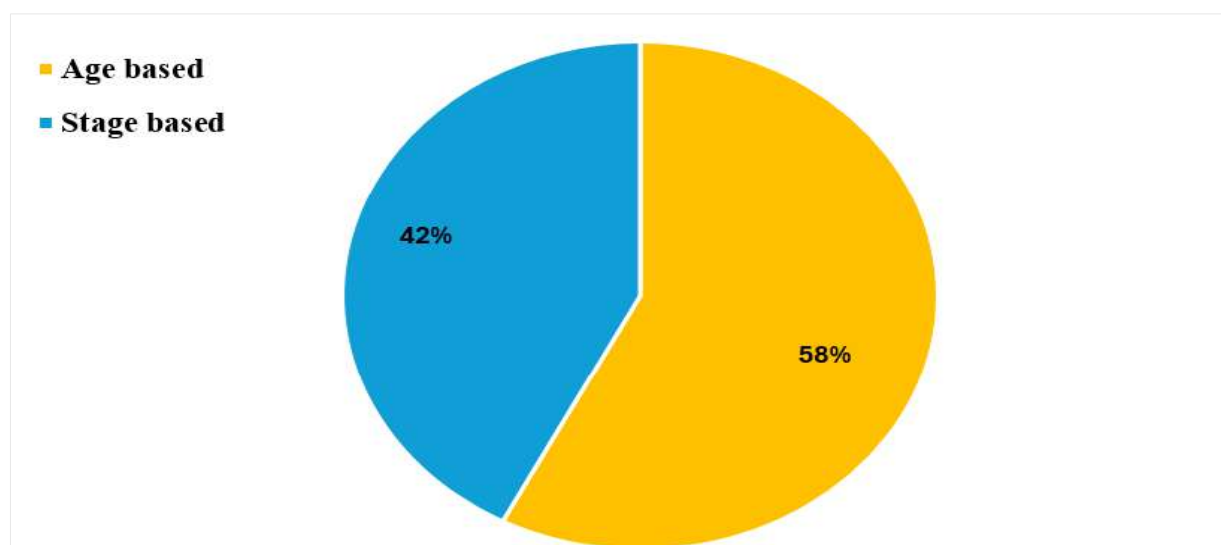


Figure 1
Schooling Pathways of Children with Autism

This distribution suggests that most learners with autism are placed in the standard age-based curriculum. One plausible reason could be that most children with autism may exhibit mild to moderate symptoms and are thus perceived as capable of coping with the demands of the age-based pathway. However, this could be a pointer to difficulties associated with the implementation of the stage-based curriculum among schools, teachers, and even parental views on the same. What remains an open question is the influence of each of these pathways on peer interaction, social learning, and exposure of children with autism. However, it suffices to note that regardless of the curriculum pathway, inappropriate placement could result in academic frustration, behavioural challenges, and/or social exclusion.

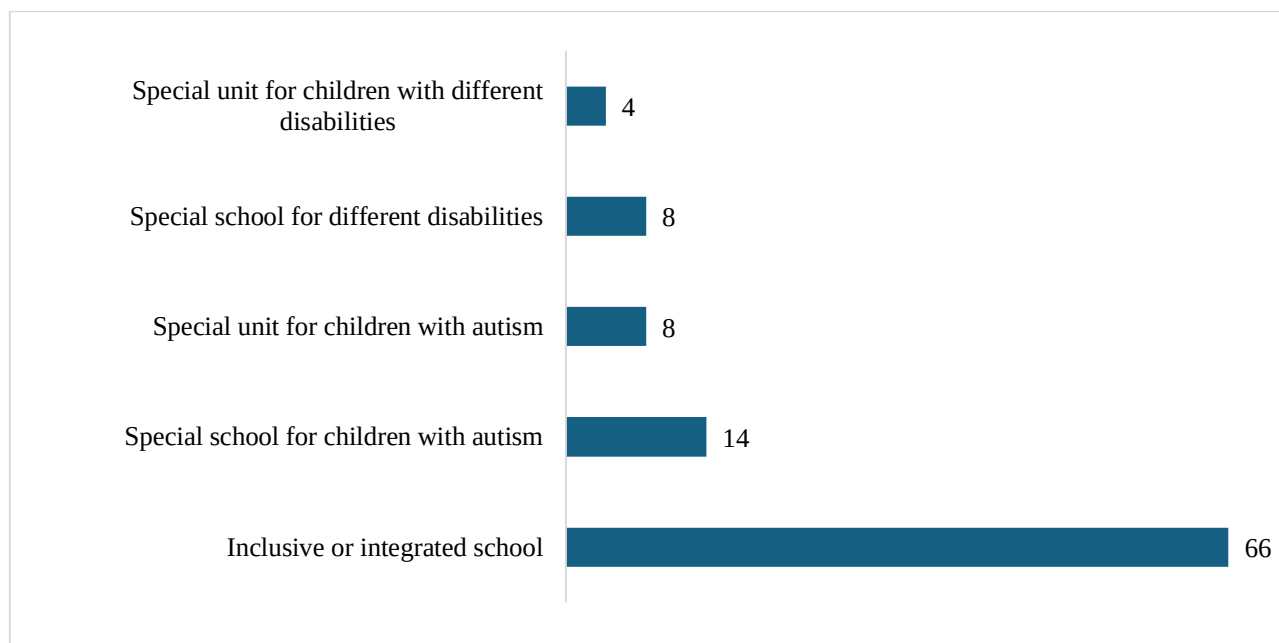


Figure 2
Type of School Attended

Results in Figure 2 show that most children with autism in Kenya are enrolled in inclusive or integrated school settings, while the rest are distributed across specialized placements in almost equal distribution, except for special units for children with multiple disabilities (4%).

This high proportion in inclusive/integrated settings may be a signal of alignment with the CBC's vision of inclusive education. The placement trend may reflect recent policy shifts and advocacy efforts aimed at dismantling segregated systems in favour of inclusive practices. However, it may also reflect limited availability or capacity of autism-specific programs, forcing families to opt for integrated schools by necessity rather than choice. Similarly, the presence of a significant proportion (34%) in segregated placements may be a pointer that inclusive education is not yet universally appropriate or accessible to children with autism.

Qualitative findings show that the availability of education programs for learners with autism are limited.

"Parents come; they want schools for learners with autism. There are not many. Like in Nairobi, I can count... and the special schools but there is a challenge for them because these other units for intellectual disability are many. Even in sports, when we are going, they don't have their own. They come under intellectual disability." – Teacher Nairobi

The findings further reveal that the available education programs accommodate more than one category of disabilities, which is likely to compromise the quality of education that these learners receive:

"The special unit is registered for intellectual disability, but we handle all disabilities because it is in a slum and those children are found there. There is no way you can leave them there. We have autism, cerebral disability (CP), multiple... They are there." – Teacher Nairobi

"My school is a public setting, and it has children with neurodevelopmental disabilities and some of them are those with autism. We try to support the ones with autism as much as we can and we have a feeding program for them." – Teacher Kiambu

CSOs confirmed the existence of limited specialized education programs specifically targeting children with autism. They largely depend on special units or placement in schools for intellectual disabilities due to the lack of dedicated autism-specific schools. For example,

“In my county, I know I have very limited schools that deal with learners of autism. Like I know we don’t have any school that is fully for autism. But most of the learners who have autism, we place them in schools for intellectual disability, unfortunately.” – CSO, Kiambu

4.1.2 Accessibility of Education Programs

Accessibility of the available education programs remains a major challenge, with fewer autism-specific units and geographical barriers being the major challenges.

“Those two special units are day schools... So, it means that those learners who are away from that area in other parts of the county cannot be able to access those two.” – CSO, Kiambu

“The school is quite a distant, so I have to organise how to drop him in school.” - Parent, open ended survey.

Even when facilities exist, other barriers such as cost, lack of trained teachers, and unsuitable placement persist.

“Because they are expensive, the accessibility is fairly poor.” – CSO, Kiambu

“Getting a school that is affordable for the child and teachers who can be able to handle a child living with autism is challenging.” - Parent, open ended survey.

“Not easy to find a school that accepts children with autism, the school is far away, most teachers don’t understand/know on how to deal with autistic children” - Parent, open ended survey.

Results show that a significant majority (73.9%) of children with autism attend school, while 26.2% do not. While this is an improvement compared to previous years, clearly at least 1 in 4 children do not access formal education programs as established in Kenya’s competency-based curriculum (CBC). More intriguing are the reasons given by parents why their children with autism did not attend school, as summarised in **Figure 3**. At least more than half of parents whose children did not attend school cited unaffordability as the primary barrier, 15% reported that their children were not safe in school, co-occurring disabilities (13%), and previous negative school experiences (10%).

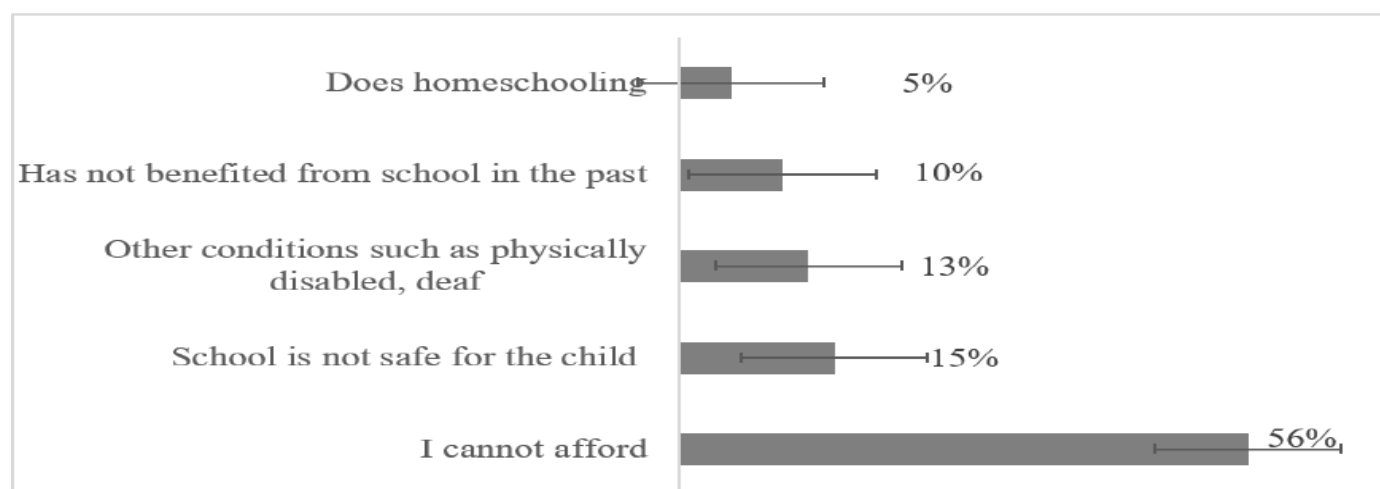


Figure 3

Reasons for not going to School

These results may suggest that the CBC’s inclusive aspirations are not fully realized for learners with autism. Even the 5% who opted for homeschooling also cited high cost and a lack of viable alternatives. For instance:

“I had to become a teacher and stop working. I became their teacher now because it was becoming very expensive.” - Parents FGD1

“Because my daughter is mildly autistic. So, she would not fit in. Then there were 15-year-olds. She was 4. There were 18s and they were to be put in the same class. No teacher. They are just playing with blocks. So, I decided to home-school her.” - Parents FGD2

Parental involvement: Despite recent evidence suggesting increasing levels of awareness among parents, we found mixed reactions from participating teachers. For instance, one teacher reported impressive parental involvement,

“I call them even during holidays... we talk about feeding, using the toilet, how to maintain routines.” - Teacher Kiambu.

Other teachers had different experiences with parents, citing lack of awareness, stigma, or denial, which emerged as major obstacles to access and continuity:

“To some extent, they [parents] are in denial... even when called, they rarely show up for IEPs.” - Teacher1, Nairobi

“Some learners are not brought by their parents; it's the grandparents or relatives... who know little about the child.” - Teacher2, Nairobi

Parental Impression of School Programs: Figure 4 presents parents' views on what they appreciated most about the schools attended by their children. The responses highlight various dimensions of the school experience, with accessibility as one of the aspects cited.

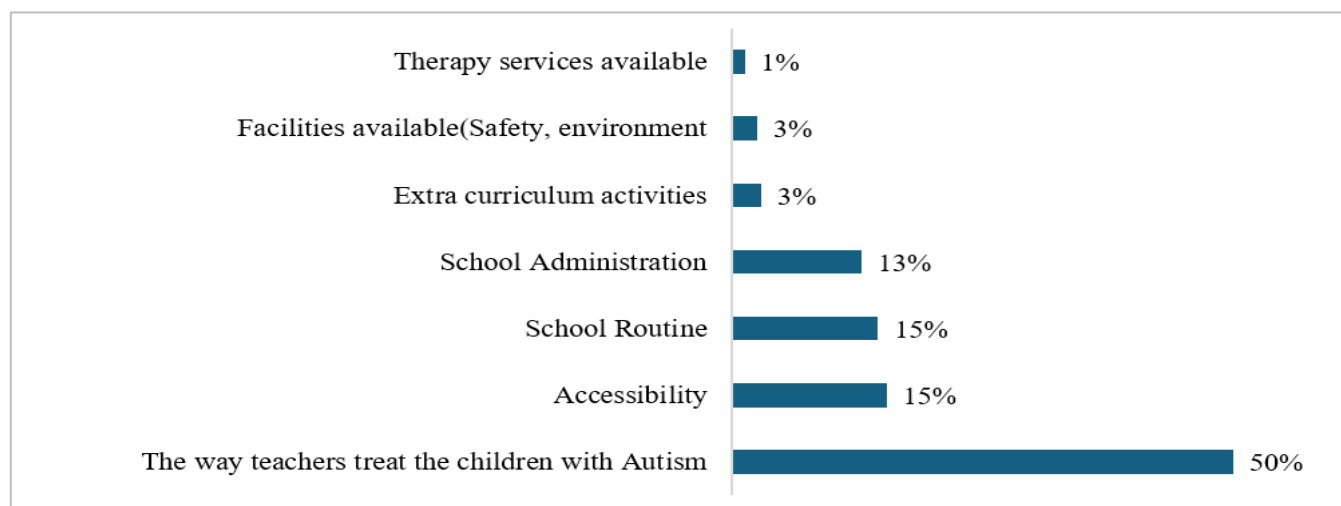


Figure 4
Parental Impression of School Programs

The results indicate that at least half of the parents valued how teachers treat children. However, other aspects directly tied to accessibility and support infrastructure show substantial weaknesses. Only 15% appreciated school accessibility, and just 1% mentioned availability of therapy services, yet these are crucial for children with autism.

Similarly, low ratings for facilities (3%), extracurricular activities (3%), and even administrative support (13%) suggest potential systemic gaps in resources, structures, and educational programming. While the CBC aspires to offer flexible, learner-centred pathways, there is a need for synergy between teachers, school administrators and resourcing to enhance access to education for learners who are already enrolled in school. A huge discrepancy in parental rating of teachers, administration and resources is a pointer to underlying structural limitation. This was further reflected in parent's perception of school's responsiveness to matters of their children, where nearly half (43.8%) of respondents perceive a less-than-optimal level of responsiveness.

Qualitative data also showed that education programs for children with autism are lowly resourced, both human and learning resources, thus limiting access:

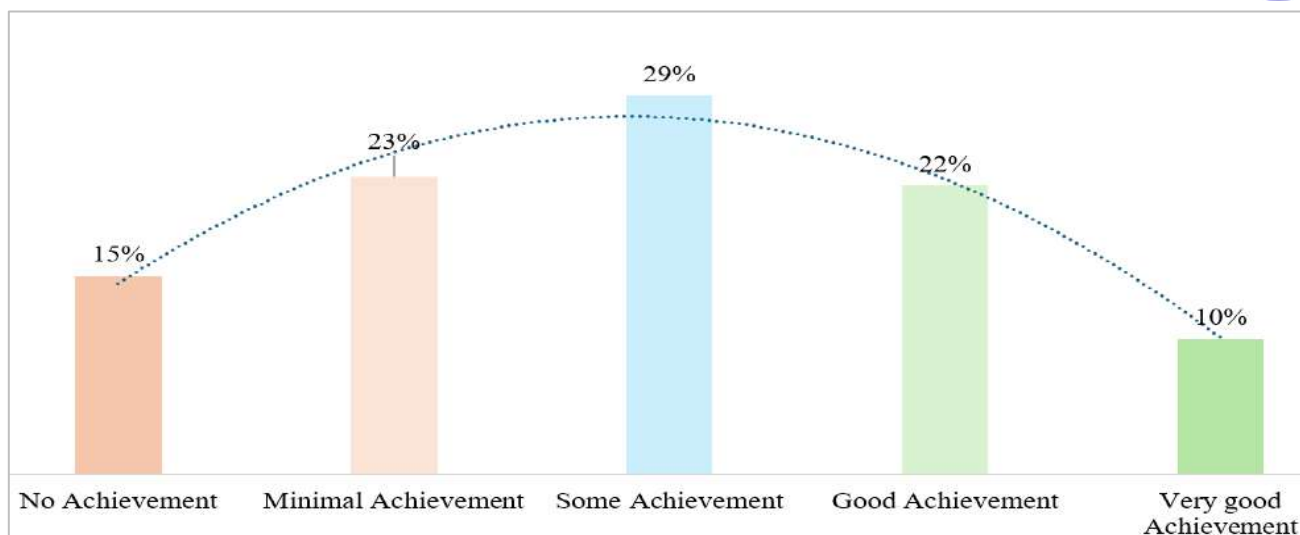
“No caregiver/specific teacher to take care of the autistic children while in school, the teachers don't understand why the child should be on special diet.” - Parent, open ended survey

“I had to hire my own special needs teacher to accompany her as an assistant teacher.” - parent FGD2

“He loves music. So, there are no music classes in those schools. He can prompt you to a song. He can listen to a song; he can sing that song but that is it because he is actually in a school of special kids. His talent is not tapped.” - parent FGD1

4.1.3 Effectiveness in Enhancing Academic and Social Development

Perceived academic achievement: The results in Figure 5 show a distribution of parental ratings of their children's academic achievement since joining school. From an individual level perspective, the highest proportion of parents (29%) reported "Some Achievement," followed by 23% who reported "Minimal Achievement", 22% indicated "Good Achievement," 15% reported "No Achievement," and only 10% noted "Very Good Achievement."

**Figure 5**

Parental Rating of Child's Academic Achievement

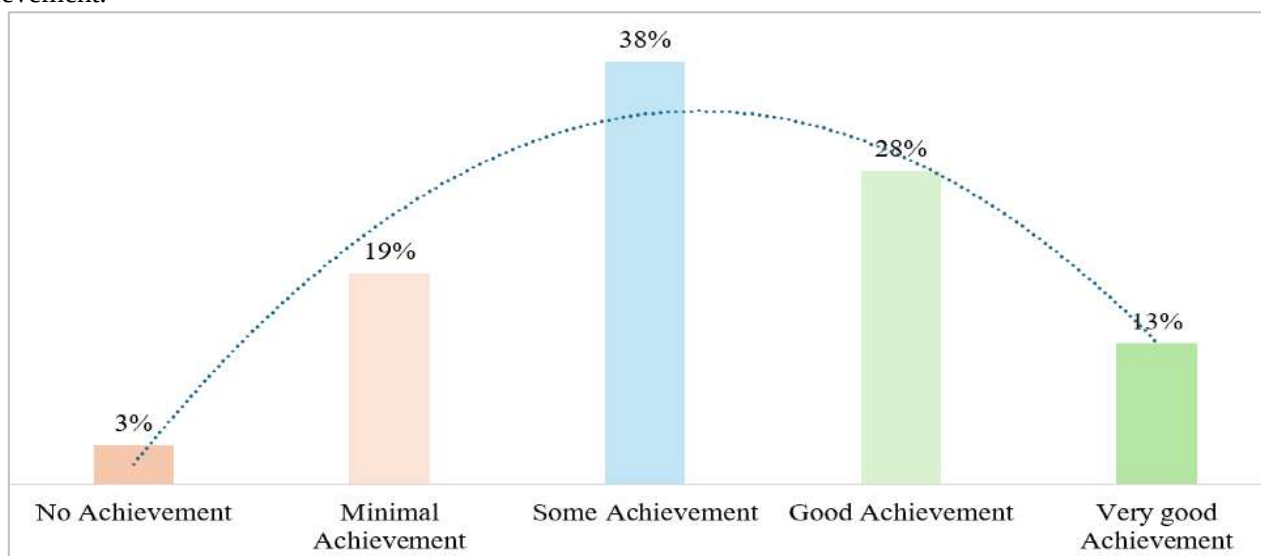
The overall distribution approximates a normal curve, with the peak occurring at moderate achievement levels and fewer parents at the extreme ends. However, the slight skew toward the lower end (38%) compared to the 32% who reported good or very good achievement combined suggests a mild tendency toward less favourable academic outcomes at the population level. This indicates that while many children are perceived to be making moderate academic progress, only a small proportion are perceived to be excelling, and a concerning number are gaining little or nothing academically. A plausible implication of these findings could be that the current education programs may be effective for the average learner, but insufficiently responsive to the needs of at least 1 in 3 learners, regardless of their potential. This finding was supported by qualitative data:

"Capturing his attention for a long time, that is the problem. So, academically, I can say, he has regressed because there is no follow-up, though sometimes he can prompt." - Parent FGD1

"There's no improvement academically at all." - Parent, open ended survey

"When it comes to composition writing, the child isn't creative, he can only narrate of past experiences but can't write those that need imagination" - Parent, open ended survey

Development of Social and Adaptive Skills: Figure 6 presents parental ratings of their children's social and adaptive skill development since joining school. Most parents reported "Some Achievement" (38%), followed by "Good Achievement" (28%), "Minimal Achievement" (19%), "Very Good Achievement" (13%), and only 3% indicated "No Achievement."

**Figure 6**

Parental Rating of Child's Social and Adaptive Skill Development

This distribution closely resembles a normal curve, centred around moderate achievement levels, but with a positive skew toward better outcomes compared to similar ratings on academic achievement ratings (**Figure 5**). The small proportion of parents reporting no or minimal gains (22%) and a combined 41% reporting good or very good development suggests that, overall, education programs are perceived to be more effective in promoting social and adaptive skills than academic competencies for children with autism. The relatively high percentage of children showing at least some progress (79%) indicates that with targeted support, children with autism can thrive socially.

Key areas of improvement perceived by parents: Results in Figure 7 show that social skills (30%), activities of daily living (ADL) (23.6%), and communication (21.3%) are the top three areas where parents observed the most significant improvements in their children with autism since joining school. This reinforces the earlier findings in Figure 6, where social and adaptive skill development received more favourable ratings than academic progress. In contrast, academic performance (0.4%), writing (4.5%), and concentration (1.9%) showed the least improvement, corroborating the earlier finding from Figure 5, where only a small proportion of parents reported good or very good academic achievement.

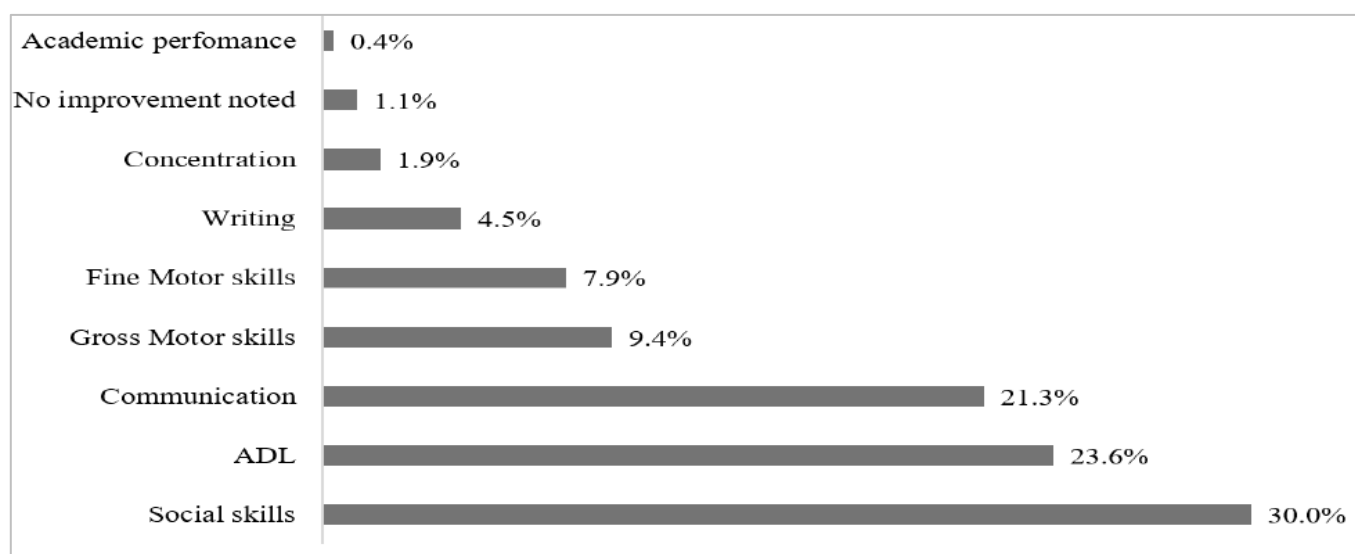


Figure 7
Areas of Improvement

These results suggest that while current education programs are relatively effective in supporting functional and socio-emotional development, they fall short in facilitating academic achievement for children with autism. This was in fact a common theme among teachers and parents holding the view that children with autism benefit more in social, adaptive, and behavioural domains than in academics. For example,

“They are benefiting... but it is not a must the child understands English or writing... it’s about surviving in the community.” - Teacher, (Nairobi)

“Taking care of those learners is good because they learn a lot, especially by interacting with others.” - Teacher, (Kiambu)

“Socially, she was doing good though. Coming back with more words; being able to relate with others, taking in instructions better because she also really copies.” - Parents FGD 1

“The first thing is that my daughter learnt how to socialize. She made her own friends.” - Parents FGD 2

Regarding CBC programs in particular, teachers had divergent views. For instance, while some teachers praised CBC’s stage-based approach as more responsive to autistic learners’ needs than the former 8-4-4 system, others were of contrary opinions:

“With CBC, they are benefiting. It is stage-based... not about grades but how this person will be tomorrow.” - Teacher, (Nairobi)

“Sometimes CBC is not helping them... especially those that don’t follow routines or can’t engage academically.” - Teacher (Kiambu)

4.2 Discussion

Findings of this study reveal a consistent view that while Kenya has made progress in establishing education programs for children with autism, they remain few and far between. These insights align with findings by Gona et al. (2016) and Abubakar et al. (2022a), who observed that special needs education in Kenya is predominantly geared toward

intellectual and physical disabilities, with minimal focus on autism-specific interventions. While the CBC has introduced stage-based pathways, the curriculum is yet to be fully adapted to reflect the unique cognitive, behavioural, and sensory needs of learners with autism (UNESCO, 2021b). The lack of specialized curricula, teaching materials, and multidisciplinary teams (e.g., speech and occupational therapists) further constrains program effectiveness. As teachers from different schools brought out, they often take on multiple roles, from caregiver to teacher, in environments that lack professional therapy services. This gap affects both learning outcomes and puts strain on teachers. Possible implication is that while structures may exist, availability remains inadequate without the specialized personnel, tools, and learning environments tailored for autism.

Accessibility of available education programs for children with autism came out as a barrier across the majority of the respondents. From the parents' perspective, financial constraints (cited by 56%) were the most prominent barrier to school attendance. Teachers and CSOs affirmed this, adding that many children with autism are either kept at home or placed in inappropriate schools due to lack of nearby autism-supportive units and lack of financial resources to reach far away units. The results highlighted that even where programs exist, many families in rural areas are unable to reach them. Critical therapy services like those at the Kenya Institute of Special Education (KISE) are limited to urban centres.

Denial, stigma, and lack of parental awareness were also cited by teachers and CSOs as barriers that keep children out of school. These findings mirror literature showing that stigma around autism and inadequate diagnostic services limit early intervention and school enrolment in many LMICs (Durkin et al., 2017; Elsabbagh et al., 2012). Moreover, many previous studies in Kenya have acknowledged the absence of systematic screening and placement policies, resulting in inequitable access to special needs education across counties (cite).

Teachers also noted classroom-level accessibility challenges, such as overcrowded classes and lack of teacher aides, especially in public schools. These issues severely limit meaningful participation and learning for children with autism even when physically present. This aligns with findings by Kiarie (2018), who argued that the presence of learners with disabilities in school does not equate to inclusion unless pedagogy, resources, and school culture are adapted accordingly.

On the effectiveness of enhancing academic, social and adaptive skills, the study findings suggest that while CBC's design may be inclusive in theory, its implementation does not yet fully support cognitive and academic development for learners with autism. Studies by Odom et al. (2010, 2022) and Pellicano et al. (2014) emphasize the importance of combining academic content with life skills, individualized goals, and behavioural support. Evidence gathered in this study suggests that approaches are still lacking in Kenya's public education sector. The lack of tailored teaching strategies, adaptive materials, and structured IEPs for autism hinders academic inclusion, even when social inclusion is achieved.

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This study reveals a complex landscape for autism education in Kenya. While the CBC has created an enabling environment through its flexible and competency-based design, implementation challenges persist in the availability, accessibility, and effectiveness of education programs for children with autism. Teachers, parents, and curriculum support officers all acknowledge the efforts made, but also reveal a persistent gap between policy and practice.

5.2 Recommendations

Addressing gaps related to availability, accessibility and effectiveness of education programs for learners with autism, requires a coordinated, well-resourced approach that ensures children with autism are present in school and meaningfully included in learning and thriving both academically and socially. The evidence suggests that for CBC to achieve its vision, several policy actions are needed: Expand the number of inclusive schools accommodating learners with autism in underserved counties. Recruit and deploy multidisciplinary teams including therapists, special educators, and aides. Strengthen EARC centres to enhance screening, placement, and follow-up services. Invest in capacity-building for teachers and school leaders on autism-responsive pedagogy. Resource schools with adequate learning resources and facilities favourable for learners with autism.

Declaration on use of AI

This paper was edited using AI tools, particularly Grammarly, for language clarity and grammar correction only. All academic content, analysis, and references were developed by the author(s).

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