

Stakeholder experiences, attitudes and perspectives on inclusive education for children with developmental disabilities in sub-Saharan Africa: A systematic review of qualitative studies

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Abstract

Inclusive education is a key strategy in addressing the needs of children with autism and other developmental disabilities in sub-Saharan Africa, who rarely access specialist care or quality education. We aimed to systematically review qualitative research on stakeholder experiences, attitudes and perspectives on inclusive education for pupils with developmental disabilities in mainstream schools in sub-Saharan Africa. We searched five databases and selected relevant studies through a two-stage screening process. We synthesised the papers identified through template analysis of the Results and Discussion sections, guided by the *Consolidated Framework for Implementation Research*. Thirty-two publications met the inclusion criteria. The studies were conducted in seven countries and explored the experiences of pupils with developmental disabilities, parents, peers without developmental disabilities and teachers. Multiple barriers (e.g. unclear policies, insufficient training and support for teachers) and opportunities (e.g. teachers' commitment to inclusion, collaboration between teachers, the work of non-governmental organisations (NGOs)) for implementing inclusive education for pupils with developmental disabilities in sub-Saharan Africa were identified, occurring across national and community contexts and school, classroom and individual teacher levels. To effectively implement inclusive education for pupils with developmental disabilities, teachers need access to appropriate training, resources and support. Governments can capitalise on motivated teachers and the relevant work of NGOs.

Lay abstract

In sub-Saharan Africa, there are few services for children with developmental disabilities such as autism and intellectual disability. One way to support these children is to include them in mainstream schools. However, currently, African children with developmental disabilities are often excluded from mainstream education opportunities. People involved (e.g. teachers, families and children) can offer information on factors that could ease or interfere with inclusion. This article discusses the findings of published studies that explored the views of relevant groups on including children with developmental disabilities in mainstream schools in sub-Saharan Africa. We systematically searched the literature and identified 32 relevant articles from seven countries in sub-Saharan Africa. We found that unclear policies and insufficient training, resources and support for teachers often blocked the implementation of inclusive education. Factors in favour of inclusive education were the commitment of many teachers to include pupils with developmental disabilities and the work of non-governmental organisations (NGOs), which provided resources and training. This review suggests that motivated teachers should be provided with appropriate training, resources and support for inclusive education, directly and by promoting the work of NGOs.

Keywords

Africa South of the Sahara, autism, developmental disabilities, education services, mainstream schools

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Introduction

Around 95% of children with autism and other developmental disabilities (DD) live in low- and middle-income countries (Global Research on Developmental Disabilities Collaborators, 2018). In sub-Saharan Africa, the number of children with DD including autism has increased by 71% over the past 25 years (Global Research on Developmental Disabilities Collaborators, 2018). However, research on autism is limited in this region (Abubakar et al., 2016; Bakare et al., 2022; Divan et al., 2021; Franz et al., 2017). Similar gaps exist in service development and knowledge on other DD, which often co-occur with diagnosed autism, especially in low-resource contexts where only more severe cases come to clinical attention.

Autism and other DD are a major global source of disability and healthcare needs (Colombi & Ghaziuddin, 2017; Global Research on Developmental Disabilities Collaborators, 2018). In low-income settings, families of children with DD tend to receive little or no formal support and are financially strained by healthcare costs and the inability to work due to caring responsibilities (Colombi & Ghaziuddin, 2017; Global Research on Developmental Disabilities Collaborators, 2018). Similar challenges have been reported across sub-Saharan Africa (Ambikile & Outwater, 2012; Dambi et al., 2015; Gona et al., 2016; Schlebusch & Dada, 2018; Tilahun et al., 2016) often with detrimental effects on the quality of life of children with DD and their families (Ambikile & Outwater, 2012; Schlebusch et al., 2017), aggravated by stigma and lack of support by community members, healthcare workers and education professionals (Ajuwon & Brown, 2012; Bakare et al., 2009; Gona et al., 2016; Tekola et al., 2016; Tilahun et al., 2016). The inadequacy or absence of specialist child mental healthcare has been noted in several African countries, including Uganda, Ethiopia, Kenya, Ghana, Zambia and to some extent South Africa (Akol et al., 2015; Getanda et al., 2017; Kleintjes et al., 2010; Tekola et al., 2020; Tilahun et al., 2016; Van Schalkwyk et al., 2016). Limited access to social services and education represents a further challenge for children with DD and their families (Ambikile & Outwater, 2012; Ireri et al., 2019; Tekola et al., 2016, 2020; Tilahun et al., 2016).

The childhood manifestation of DD calls for services and inclusion in relevant platforms of care that can support development throughout childhood and adolescence (Kieling et al., 2011). Schools, when offering sufficient assistance, can be ideal platforms for such services, also ensuring that caring responsibilities are not placed exclusively on families (Uba & Nwoga, 2016). Nonetheless, pupils with DD in sub-Saharan Africa remain mostly unschooled (McKenzie et al., 2013), as they are often excluded from mainstream education, and face availability, accessibility and affordability barriers to enrolment in special schools: these are usually few and expensive

institutions, located in the capital and with low capacity (Tekola et al., 2016; Van der Linde et al., 2019).

While specific data on schooling for children with DD are lacking, World Bank data from 13 sub-Saharan African countries indicated that 12-year-old children with any disabilities are substantially less likely to have ever enrolled in school than their peers (World Bank, 2018). Notably, pupils with DD are likely to experience higher exclusion rates than children with sensory or physical impairments. For example, in a recent Ugandan population-based study (Andrews et al., 2020) on cerebral palsy, a third of children with the condition aged 6–17 years attended school, but this proportion decreased to only 8% for those with a co-morbid diagnosis of intellectual disabilities. While not specifically categorised within the diagnostic labels of autism or other DD, global data from the United Nations Children's Fund (UNICEF, 2021) show that, among children with disabilities, the most likely to be out of school and to have never attended school are those with difficulties in communication and/or self-care. In addition, children who struggle to make friends are more likely to be out of school than those with physical or vision disabilities (UNICEF, 2021).

Striving for inclusive education

Inclusive education (IE), the practice of addressing the diverse needs of all learners in mainstream classrooms, is recognised by international standards as key to enabling children with disabilities to realise their right to full participation in the community, as per the United Nations' *Convention of the Rights of Persons with Disabilities* (UN General Assembly, 2007). Ministries and Departments of Education across sub-Saharan Africa strive to promote IE, through education policies (Nigeria Federal Ministry of Education, 2015; South Africa Federal Ministry of Education, 2015) and action plans (Federal Democratic Republic of Ethiopia Ministry of Education, 2020; United Republic of Tanzania Ministry of Education, 2017), although only 42% of Sub-Saharan African countries have IE policies (UNESCO Global Education Monitoring Report Team, 2020).

Beyond policies, IE has yet to be fully implemented in sub-Saharan Africa (Chataika et al., 2012; UNESCO Global Education Monitoring Report Team, 2020). While some strategies relevant to pupils with DD are proposed in action plans (e.g. Federal Democratic Republic of Ethiopia Ministry of Education, 2015), so far, implementation efforts are mainly focussed on providing equipment and infrastructure accommodations for children with physical and sensory disabilities, such as books in Braille (Ajuwon & Chitiyo, 2016). Resources for severe DD, which lead to more complex needs, are limited, as reported for example in South Africa (UNESCO Global Education Monitoring Report Team, 2020) and Nigeria (Ajuwon & Chitiyo, 2016).

Capturing stakeholder voices

Implementation science evidence shows that the successful implementation of any innovation is influenced by factors intrinsic to the innovation and the implementation process and by contextual factors at the individual, organisation and broader socio-political levels (Damschroder et al., 2009). The direct experiences of relevant stakeholders can provide important information on factors that facilitate or hinder innovations in general (Damschroder et al., 2009), and IE specifically (UNESCO Global Education Monitoring Report Team, 2020). In addition, understanding the potential opposition of some stakeholders to IE is needed to develop implementation strategies to overcome this potential barrier. For instance, DD in Africa are often considered a curse or punishment, leading community members and school staff to hold negative attitudes towards pupils with DD (Abosi, 2007; Stone-MacDonald, 2012; Uba & Nwoga, 2016). In turn, these can hinder effective inclusion (Abosi, 2007; Adera & Asimeng-Boahene, 2011), while its success requires the commitment of all stakeholders (Omede, 2016). A strong plan for implementing IE for pupils with DD in sub-Saharan Africa, therefore, requires appropriate consideration of the experiences, views and attitudes of diverse stakeholder groups.

A qualitative analysis of data from stakeholders in six sub-Saharan African countries reported favourable attitudes towards IE for children with disabilities more generally (Hui et al., 2018). However, overall a multifaceted picture emerges from the evidence on this topic. Children with disabilities and their parents in multiple countries appreciated the opportunities for inclusion and learning provided by IE, but also reported instances of peers' bullying and teachers' hostile attitudes (Asamoah et al., 2018; Bannink, Nalugya, & Van Hove, 2020; Brydges & Mkandawire, 2017, 2020; Leseyane et al., 2018; Magumise & Sefotho, 2020). Mainstream teachers, at times keen to promote education for all pupils (Asamoah et al., 2018; Franck & Joshi, 2017; Magumise & Sefotho, 2020; Mukhopadhyay, 2014), often felt they were not sufficiently trained for IE, or feared their teaching could be slowed down by children with disabilities (Asamoah et al., 2018; Chhabra et al., 2010; Franck & Joshi, 2017; Kuyini et al., 2020; Mukhopadhyay, 2014). Understanding whether a similar ambivalence exists when focusing on the inclusion of children with DD in specific can lead to better promotion of IE for this group.

Aims and objectives

Attitudes, beliefs and experiences are captured in depth through qualitative research, which can provide novel information reflecting stakeholder perspectives. Reviewing and synthesising multiple qualitative studies can provide insights into themes that are recurrent across various

samples from different countries and stakeholder groups (Thomas & Harden, 2008), setting the basis for context-appropriate recommendations to implement inclusive practices in sub-Saharan Africa. This systematic review aims to synthesise qualitative research on stakeholder experiences, attitudes and perspectives on the inclusion of pupils with DD in mainstream schools in sub-Saharan Africa. Specifically, the focus is on primary and secondary schools, typically grouped as a distinct category from other educational levels in global reports and targets on education access and inclusion (UNESCO Global Education Monitoring Report Team, 2020). The specific objectives of this review are:

1. To systematically identify qualitative studies on stakeholder experiences of and attitudes towards IE of pupils with DD and perspectives on implementation feasibility and barriers in primary and secondary schools in sub-Saharan Africa.
2. To critically appraise and synthesise results from the above studies, describing factors that can influence the successful implementation of IE for the target group.
3. Based on this synthesis, to provide recommendations for the promotion and implementation of inclusion of the target group in mainstream classrooms across sub-Saharan Africa.

Method

The present review was conducted through systematic steps and reported following the *Enhancing transparency in reporting the synthesis of qualitative research (ENTREQ)* statement (Tong et al., 2012). Following the planning phase, including trial searches to define a comprehensive search strategy, a protocol was submitted to *PROSPERO* (National Institute for Health Research, n.d.) on 5 June 2020 and published online on 9 July 2020 (CRD42020185486).

Systematic search

The search was run in health and education databases – PsycInfo (Ovid), MEDLINE (Ovid), Embase (Ovid), Global Health (Ovid), ERIC (Ebsco) – on 3 July 2020, then updated on 14 September 2021. Only peer-reviewed journals were searched in the databases that allowed this option (PsycInfo, ERIC) and any non-peer-reviewed publications were removed in the first screening stage when needed. No language or date restrictions were imposed.

The search strategy aimed to identify papers that combined four concepts, for which relevant keywords were identified through extensive brainstorming and consultation of similar reviews:

1. experiences, attitudes, perspectives and generally qualitative data;
2. education;
3. DD and related concepts;
4. sub-Saharan African countries.

In this review, ‘DD’ refers to intellectual disabilities, autism, attention-deficit hyperactivity disorder, language and social communication disorders, and extends to developmental delays, in which substantial problems in cognitive and/or behavioural development have been identified although not formally diagnosed. These definitions are in line with the forthcoming WHO UNICEF Global Report on Developmental Delays and Disabilities. It was decided to include ‘disability’ and ‘special needs’ among the keywords, to identify all potentially relevant studies, as general terms are often preferred to naming specific conditions in education research abstracts.

The full search strategy is available in *Supplementary Material A*. After screening (detailed below), forwards and backwards citation checks were carried out for all studies selected, to identify studies that were missed in the database search.

Selection of studies

Authors EG and LN each independently reviewed titles and abstracts of all studies identified through the search, to select potentially relevant ones. Disagreement was resolved through discussions between the reviewers. Both reviewers then evaluated the full text of all articles selected, to identify those that met all inclusion criteria. Results were discussed with a third researcher (RAH), who resolved disagreements on three studies (2.2%).

We included primary research studies conducted at least in part in sub-Saharan Africa, which used qualitative methods to investigate stakeholder experiences, perspectives and attitudes towards the IE of pupils with DD in primary and secondary schools. We excluded studies centred around physical or sensory disabilities, or specific learning disabilities, such as dyslexia, as these require different provisions compared to DD. We included studies about IE of pupils with SEN in general, where participants or setting information indicated that at least 40% of participants had the experience of DD (directly, or indirectly through teaching or caregiving responsibilities). Full inclusion and exclusion criteria are reported in *Supplementary Material B*.

Quality appraisal

EG and CJ appraised the quality of the studies selected using the *Critical Appraisal Skills Programme* (CASP, 2018) checklist for qualitative studies. Disagreement and uncertainty on 4% of decisions were resolved through discussions between the raters and CH. Quality appraisal was

not used to exclude studies, but rather for assessment of the results presented and comparisons across studies.

Data extraction

For each study, EG extracted, through a bespoke form, information on authors, publication year, aims and methodology, recruitment, sample size and characteristics, disorders considered, country, setting details, data collection and analysis methods and themes discussed. The Results and Discussion sections of each report were extracted and uploaded to the qualitative data analysis application NVivo-12 to be analysed.

Synthesis

Thematic synthesis (Thomas & Harden, 2008) was applied to the studies, as this method is appropriate for synthesising qualitative studies which employed various methodologies. The analysis was rooted in critical realism, under the assumption of an existing reality, of which researchers aimed to analytically describe subjective stakeholder experiences. The approach chosen to develop analytical themes was template thematic analysis (Brooks et al., 2015).

EG first familiarised herself with the data, then coded meaningful sections with descriptive codes. Codes were iteratively revised and interpreted reflexively throughout. A coding template was generated deductively organising initial codes according to the *Consolidated Framework for Implementation Research* (CFIR; Damschroder et al., 2009). The CFIR aims to organise data on attitudinal and contextual factors surrounding the implementation of diverse innovations, to guide implementation efforts. It includes five domains relative to the intervention, outer setting, inner setting, individuals involved and implementation process (Damschroder et al., 2009). This framework was selected to organise stakeholder experiences and perspectives on factors influencing IE in a comprehensive way that would elicit targeted recommendations for implementing IE for pupils with DD.

Although the analysis was theory-driven and conducted systematically, there was no intention to eliminate subjectivity. In line with principles of reflexive thematic analysis (Braun & Clarke, 2019), applicable to the flexible template analysis (Brooks et al., 2015), subjective interpretation, appropriately recognised and documented, was considered a strength of the synthesis. Throughout the analysis, the main investigator was conscious of her own assumptions: a belief in the rights of persons with disabilities and positive attitudes towards IE and its implementation in low-resource settings.

After analysing the content of themes, the studies were grouped according to various features, including quality, stakeholder group and country, to compare them and to provide a richer account of factors influencing stakeholders’ views.

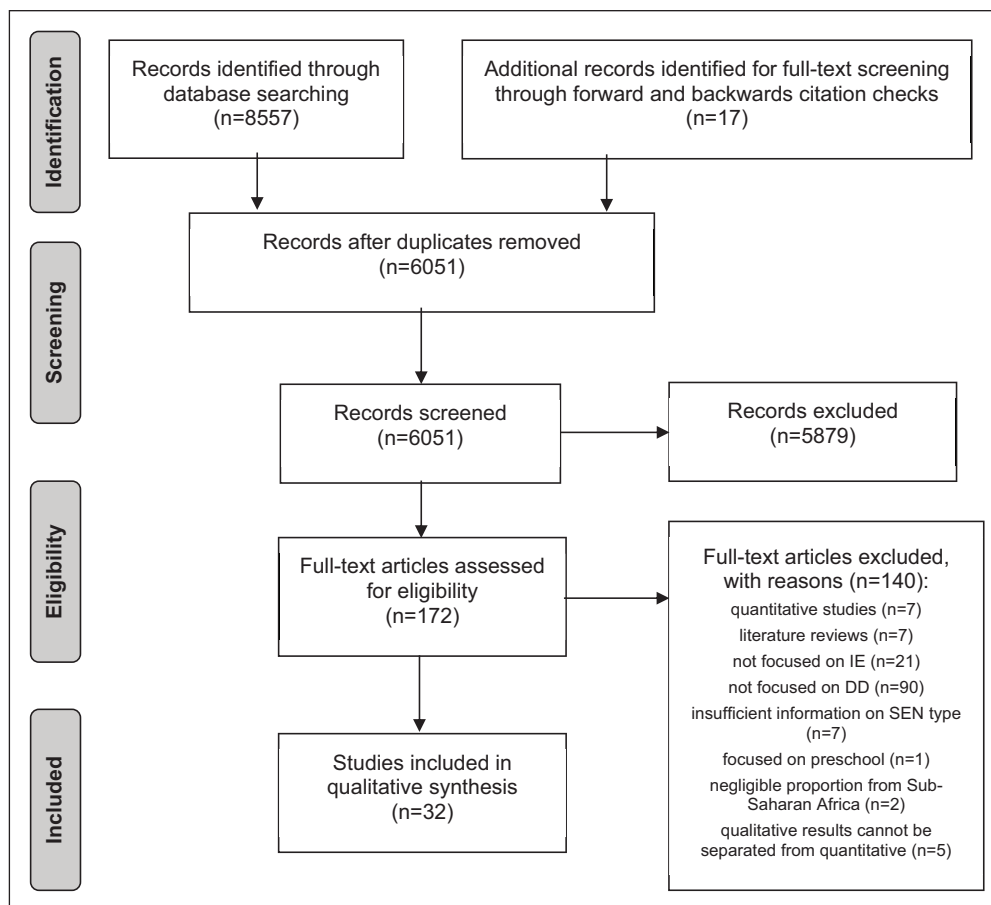


Figure 1. PRISMA flow diagram (Moher et al., 2009) of the study selection process.

Community involvement statement

Community stakeholders were not directly involved in this work. This review was nonetheless informed by needs expressed by parents of children with DD in our previous studies in sub-Saharan Africa (Tekola et al., 2020; Tilahun et al., 2016), and in interactive stakeholder meetings organised in Addis Ababa in 2019 and 2021. Lack of access to appropriate education (if not necessarily IE) is a key service gap according to parents (Tekola et al., 2020; Tilahun et al., 2016), and was one of the most prominent concerns expressed by parents of children with DD at two meetings on autism in Africa (Stellenbosch 2017 and Durban 2019) attended by the last author of this review.

Results

Study selection process and results

A total of 32 articles, including 29 qualitative and 3 mixed-methods studies, were selected (see PRISMA flow diagram Moher et al., 2009, in Figure 1).

Of the 32 studies selected, 14 were conducted in South Africa, 5 in Zimbabwe, 4 in Botswana, 3 in Ghana, 3 in Uganda, 2 in Nigeria and 1 in Eswatini, all between 2001 and 2020. With some studies including multiple stakeholders, teachers' experiences were explored in 26 studies, parents' views in 7, pupils' experiences in 6 directly and 2 through observation and informants' reports.

In general, the research selected was deemed good quality in both methods and reporting. Common weaknesses in the studies included a lack of reflection on the relationship between researchers and participants and limited descriptions of the analysis approach. In a few instances, small samples sizes were not justified, or the analysis did not appear rigorous or was based entirely on super-imposed categories (e.g. interview questions) or quantitative entities (e.g. percentages of positive and negative responses).

Table 1 details the main study features and quality judgements. Demographic information was not recorded, due to the scarcity and variability of information reported in the studies. Full data extraction forms and a summary table of critical appraisal are available in *Supplementary Materials C* and *D*, respectively.

Table 1. Characteristics of included studies.

| First Author | Country | Topic of Interest Relative to IE | Disorder of Interest | Methodology | Recruitment | Participants | School Level | Data Collection | Data Analysis | Quality |
|---|--------------|---|------------------------------|---|-------------------------------------|---|-----------------------|--|-------------------------------|-----------|
| Alhassan and Abosi (2017) | Ghana | Teachers' competence in curriculum adaptations | LD | Mixed-method, Phenomenology | Purposive | 10 general teachers | Primary | Interviews, FGDs | IPA | Average |
| Bannink et al. (2016) | Uganda | Accessibility and inclusion | Spina bifida, including ID | Mixed-method | Purposive | 30 general teachers (22 female), 30 pupils with SEN (12 female), 30 caregivers (27 mothers) | Primary (and nursery) | Observation, interviews | Thematic | Good |
| Bannink, Nalugya, Kawesa, et al. (2020) | Uganda | Intervention development and testing | SEN, including DD | Participatory action research, case studies, visual and oral narratives | Purposive | 64 parents, 33 general teachers, 32 pupils with SEN, 32 peers | Primary | Interviews, FGDs, observation, PAR meetings | Thematic, Framework | Excellent |
| Bannink, Nalugya, and Van Hove (2020) | Uganda | Indigenous explanations and frameworks | DD | Qualitative, exploratory | Purposive, Typical cases | 9 parents (8 mothers) | Primary | Interviews (based on cases observation, workshops) | Thematic | Very Good |
| Brydges and Mkwandawire (2020) | Nigeria | Parents' experiences and perceptions | SEN, including DD | Phenomenological | Purposive, Snowballing, Convenience | 12 parents (10 mothers) | Primary | Interviews | Thematic, Content | Good |
| De Jager (2011) | South Africa | Pupils' sensory processing difficulties | ASD | Case studies | Purposive | 2 pupils with ASD (male; 5-7 years), 2 general teachers, 1 psychologist | Primary | Case observation, informant interviews | Thematic | Average |
| De Jager and Condy (2017) | South Africa | Pupil's executive function and behavioural adaptation | ASD | Interpretative case study | Purposive | 1 pupil with ASD (male; 9 years), 1 general teacher | Primary | Case observation, informant interview | Thematic, Interpretative | Good |
| Engelbrecht et al. (2001) | South Africa | Teachers' stressors and coping skills | ID | Qualitative (NS) | Purposive | 10 general teachers (female) | Primary | Questionnaire, observation, interviews | Thematic | Very Good |
| Engelbrecht et al. (2003) | South Africa | Teachers' stressors | ID | Mixed method | Purposive | 10 general teachers | Primary, Secondary | Interviews | Thematic, Framework | Good |
| Lopes et al. (2009) | South Africa | Teachers' experiences | ADHD | Narrative design | Purposive, Convenience | 17 general teachers (female) | N/A | Interviews | Thematic, Narrative | Excellent |
| Majoko (2016) | Zimbabwe | Barriers and enablers | ASD | Qualitative (NS) | Purposive | 21 general teachers (12 female; 27-65 years) | Primary | Interviews | Thematic, Cross-case | Average |
| Majoko (2017) | Zimbabwe | Teachers' support practices | ASD | Phenomenological case studies | Purposive | 18 general teachers (11 female; 31-57 years) | Primary | Observation, document analysis, interviews | Thematic | Very Good |
| Majoko (2018) | Zimbabwe | Teachers' experiences and competence | ASD | Phenomenology | Purposive | 24 general teachers (9 female) | Primary | Interviews | Thematic, Constant-comparison | Very Good |
| Majoko (2019) | Zimbabwe | Teachers' views on key competences | SEN, including ADHD, LD, EBD | Interpretative design | Purposive | 24 general teachers (6 female) | Primary | Interviews | Thematic, Cross-case | Very Good |
| Mangope (2017) | Botswana | Teaching strategies | ID | Interpretative multiple case study design | Purposive | 8 special teachers | Primary | Observation, interviews, document analysis | Thematic, Content | Average |
| Mangope et al. (2018) | Botswana | Teaching practice experiences | 22% ID, 48% LD | Phenomenology | Purposive | 23 pre-service special teachers | Secondary | Interviews, FGDs | Thematic | Very Good |

(Continued)

Table 1. (Continued)

| First Author | Country | Topic of Interest Relative to IE | Disorder of Interest | Methodology | Recruitment | Participants | School Level | Data Collection | Data Analysis | Quality |
|-----------------------------------|------------------------|--|----------------------------|-----------------------|--------------------------|--|---------------------------------------|--|-------------------------------|-----------|
| Mapuranga et al. (2015) | Zimbabwe | Impact on rights | ID | Qualitative (NS) | Random | 10 general teachers, 10 parents, 10 pupils with ID | Secondary | Interviews, questionnaires | N/A | Very Poor |
| Matsenjwa et al. (2020) | Eswatini | Teachers' experiences collaborating with parents | ID | Phenomenology | Purposive, rich cases | 24 special teachers (15 female) | Primary | Interviews, FGDs | Thematic | Average |
| Mohamed and Laher (2012) | South Africa | Teachers' understanding of LD | LD | Qualitative (NS) | Convenience | 8 general teachers (female) | Primary | Interviews | Thematic, Reflexive | Average |
| Mokobane (2011) | South Africa | Pupils' engagement | ID | Case study | Purposive | 10 general teachers, 10 pupils with ID | Secondary | Interviews, FGDs | Spiral | Poor |
| Mukhopadhyay et al. (2019) | Botswana | Pupils' experiences | 19.4% ID, 25% LSI | Qualitative (NS) | Purposive | 36 pupils with SEN (8–14 years), 36 without SEN | Primary | Observation, FGDs | Thematic, Constant-comparison | Good |
| Ngcobo and Muthukrishna (2011) | South Africa | Pupils' experiences | 78.5% LD, 1% ASD, 3% ID | Qualitative (NS) | N/A | 1 principal, 5 general teachers | Primary | Observation, document analysis, interviews | Thematic | Average |
| Okyere et al. (2019a) | Ghana | Pupils' experiences | DD | Descriptive design | Purposive | 16 pupils with DD (8 female) | N/A | Observation, draw-and-write, interviews | Thematic | Very Good |
| Okyere et al. (2019b) | Ghana | Teachers' experiences | DD | Descriptive design | Purposive | 16 general teachers, 2 special teachers | Primary | Interviews | Thematic, Reflexive | Very Good |
| Otukile-Mongwaketse et al. (2016) | Botswana | Teachers' understanding of curriculum adaptation | LD | Qualitative (NS) | Purposive | 12 general teachers (30–48 years) | Primary | Observation, interviews | Thematic | Good |
| Potgieter-Groot et al. (2012) | South Africa | Training programme development | EBD | Action research | Purposive | 35 general teachers, 14 school staff (40 female) | Primary | FGDs, observation, feedback forms | Thematic, Reflexive | Very Good |
| Seabi (2010) | South Africa | Teachers' perceptions of ADHD | ADHD | Qualitative (NS) | Convenience | 5 general teachers | Primary | Interviews | Thematic, Small q | Poor |
| Uba and Nwoga (2016) | Nigeria | Parents' interpretation of stigma | ASD, ADHD, ID, LSI | Narrative design | Convenience, Snowballing | 8 mothers | Primary, Secondary | Interviews | Thematic, Reflexive | Good |
| Van Schalkwyk and Marais (2017) | South Africa | Teacher-pupil relations | FASD | Qualitative (NS) | Purposive | 14 general teachers (11 female) | Primary | Interviews, FGDs | Thematic, Reflexive | Good |
| Walton and Rusznyak (2014) | South Africa | Special-school teaching practice learning | SEN, including LD, ID | Interpretative design | Convenience | 15 pre-service teachers (14 female) | Primary, Secondary | FGDs | Thematic, Framework | Excellent |
| Yoro et al. (2020) | South Africa | Teachers' understanding | DD (mostly ADHD) | Interpretative design | Purposive | 6 general teachers (5 female, 22–28 years) | Secondary | Observation, interviews, incident reports | Thematic, Reflexive | Good |
| Yssel et al. (2007) | South Africa (and USA) | Parents' perceptions | SEN, including ASD, ID, LD | Qualitative (NS) | Convenience | 32 South African parents (25 mothers), 10 American mothers | Primary, Secondary (and 5% Preschool) | FGDs | Thematic, Constant-comparison | Poor |

Abbreviations: ADHD: attention-deficit hyperactivity disorder; ASD: autism spectrum disorder; DD: developmental disorder (not specified); EBD: emotional/behavioural difficulty/disorder; FASD: fetal alcohol spectrum disorders; FGDs: focus group discussions; ID: intellectual disability; IPA: interpretative phenomenological analysis; LD: learning difficulty/disability; LSI: language/speech impairment; N/A: not available; NS: not specified; SEN: special education needs.

Synthesis

The codes generated through the thematic synthesis of the Results and Discussion sections of the selected studies mostly fitted in with CFIR domains (Damschroder et al., 2009). Aligning this review with the terminology used in CFIR, ‘inclusive education’ is the innovation, and mainstream schools are the implementation setting of interest. Following the CFIR, five themes were developed (see Table 2); a codebook summary is provided in *Supplementary Material E* and all coded extracts are available upon request. Each of the themes will be discussed in turn. Example quotes from the studies are reported in inverted commas, with words from participants or documents in italics.

Framing of IE

This theme refers to the core characteristics of IE as reported in the studies reviewed. IE was framed in the studies reviewed as ‘commitment to enhance the achievement of all children while safeguarding the inclusion of those who are vulnerable’ (Majoko, 2018). The goal ‘to take into account the differences and needs of all the learners’ (Mukhopadhyay et al., 2019) was mentioned across studies and supported by relevant education literature cited in the studies reviewed, which was used as theoretical contextualisation of stakeholders’ views. Discourses around IE focussed on its compliance with human rights and policy and its benefits to pupils with DD.

IE as a mandated practice. IE could be perceived as developed within the schools or imposed from an external source. Participants in, and authors of, the studies reviewed primarily considered the source of IE external to schools, mandated by policy.

‘Since Zimbabwe adopted inclusive education in 1994 in alignment with the global arena, learners with special needs, including autism, learn in regular classes’ (Majoko, 2017)

‘Due to my social, cultural, moral and legal obligation to include all children in my classroom, I finally accepted him’ (teacher; Majoko, 2019)

The co-existing internal, ‘moral’, source of IE, identified in the above quote, was also reported by other members of various stakeholder groups, who acknowledged that IE is a right for children with SEN (Mapuranga et al., 2015; Mukhopadhyay et al., 2019).

Two recent studies expressed that, according to indigenous frameworks of IE, children with disabilities had to deserve inclusion by showing they had the ‘ability to manage’ (Bannink, Nalugya, & Van Hove, 2020) and to ‘adapt to the challenges of learning alongside other students’ (Brydges & Mkandawire, 2020). However, one of them

(Bannink, Nalugya, & Van Hove, 2020) highlighted that stakeholders resorted to human rights frameworks to understand the need to include the children whose disabilities did not allow them to fit in the indigenous framework.

Benefits of IE. Stakeholders discussed the advantages of IE compared to its alternatives – mainly segregated special education. Critically, studies exploring the views of pupils with DD suggested their preference for learning with typically developing peers in mainstream classrooms (Bannink et al., 2016; Mukhopadhyay et al., 2019; Okyere et al., 2019a), where they could progress academically:

‘I am now going to be able to move to secondary school like my friends, unlike growing old in the [special] unit classroom’ (learner with SEN; Mukhopadhyay et al., 2019)

South African parents explained children’s preference with their ‘determination to be like everybody else’ (Yssel et al., 2007). Parents equally ‘desired to raise their children as normally as possible’ (Yssel et al., 2007), although their preferences seemed more nuanced and dependent on the quality of inclusion. Multiple studies discussed how poor inclusion, when children with DD are stigmatised and their needs ignored, leads to experiences of discrimination, underachievement and a ‘variety of negative outcomes such as loss of self-esteem and poor motivation’ (Alhassan & Abosi, 2017).

Nonetheless, successful IE was consistently reported to promote children’s integration in the community, socialisation with their peers and reduced discrimination, compared to segregated education:

‘Teacher application of a universal approach to the management of obsessions and compulsions potentially eliminated typically developing learners’ stigmatization of their peers with autism’. (Majoko, 2017)

Context for inclusion

Needs of children with DD. Teachers, learners and observers reported various needs of children with DD, particularly relating to learning and attention challenges, poor functional development, emotional and social difficulties, sensory challenges and rigidity. The most frequently reported challenges for children with any DD were learning and attention difficulties. About these pupils, South African teachers said:

‘There are some kids who have difficulty understanding basic concepts, you know it takes long to understand a simple concept that you teach them.’. (Mohamed & Laher, 2012)

‘He cannot pay attention in class or finish his work’. (Engelbrecht et al., 2003)

Table 2. Overview of relevant constructs of the *Consolidated Framework for Implementation Research* (Damschroder et al., 2009) and corresponding themes and subthemes.

| CFIR constructs | Short description of CFIR constructs relevant to the analysis | Corresponding themes and subthemes developed in this study |
|--|--|---|
| Intervention characteristics | Features of the innovation to be implemented | 1 Framing of IE |
| Intervention source | Perspectives on the internal or external nature of source of the innovation | 1.1 IE as a mandated practice |
| Evidence strength and quality Relative advantage | Perceived advantage compared to alternatives | 1.2 Benefits of IE |
| Adaptability Triability Complexity Design Quality and Packaging | | |
| Outer setting | Socio-political factors and external inputs | 2 Context for inclusion |
| Patient needs and resources | The target group's needs and whether they are known within the implementation setting | 2.1 Needs of children with DD |
| Cosmopolitanism Peer pressure External policy and incentives | Resources, including policy, guidance, supervision and incentives, provided by governments or other external organisations to facilitate implementing the innovation | 2.2 Policy & incentives for IE |
| Inner setting | Structural, cultural and organisational factors internal to the implementation setting | 3 Barriers and facilitators for inclusion within mainstream schools |
| Structural characteristics Networks and communications | Quality and extent of formal and informal internal communications | 3.1 Within-school interactions |
| Culture | Norms, values and common perspectives within the implementation setting | 3.2 School culture |
| Implementation climate | Internal factors that directly facilitate or hinder the implementation process | 3.3 School climate for IE implementation: |
| <i>Tension for change</i> | Staff's perceptions that the current situation needs improvement | <i>3.3.1 Teachers' longing for improvement</i> |
| <i>Compatibility</i> | The extent to which the innovation is perceived as compatible with current organisational norms, workflow and staff's needs | <i>3.3.2 IE compatibility with mainstream school practice</i> |
| <i>Relative priority</i> <i>Organisational incentives and rewards</i> <i>Goals and feedback</i> <i>Learning climate</i> | | |
| Readiness for implementation | Tangible indicators of preparedness to implement | 3.4 Availability of resources & training |
| <i>Leadership engagement</i> <i>Available resources</i> <i>Access to knowledge and information</i> | | 3.5 Inner-inner setting: inclusion in the classroom ^a |

(Continued)

Table 2. (Continued)

| CFIR constructs | Short description of CFIR constructs relevant to the analysis | Corresponding themes and subthemes developed in this study |
|--|--|--|
| Characteristics of individuals | Organisational features measured at the individual level | 4 Relevant features of teachers |
| Knowledge and beliefs about the intervention | Individuals' attitudes towards and understanding of the innovation | 4.1 Teachers' knowledge & beliefs about inclusion |
| Self-efficacy | Individuals' confidence in their ability to implement the innovation | 4.2 Teachers' skills and confidence for IE |
| Individual stage of change | Progression towards full ability for implementation | |
| Individual identification with organisation | | |
| Other personal attributes | | 4.3 Teachers' relational patterns with pupils |
| Process | Key activities for implementation | |
| Planning | | |
| Engaging | Engaging stakeholders | 5 Engaging stakeholders to implement IE |
| Opinion leaders | | |
| Formally appointed internal implementation leaders | | |
| Champions | | |
| External change agents | | |
| Executing | | |
| Reflecting and evaluating | | |

CFIR: Consolidated Framework for Implementation Research.

^aGiven the nature of the school environment and through the analysis of data, a further layer of contextual information, referring to the classroom setting, has been added here compared to the *Consolidated Framework for Implementation Research*.

Pupils with DD themselves reported struggling with their attention and learning:

'When teacher is talking it is difficult to listen and understand so I look in the window' (pupil with DD; Okyere et al., 2019a)

Five studies on IE of pupils with ASD (De Jager, 2011; De Jager & Condy, 2017; Majoko, 2016, 2017, 2018, 2019) reported barriers to their inclusion that were not discussed for other disorders, specifically challenging sensory experiences and rigidity of thought, interests and routines. For example, in one study, the majority of teachers recognised that:

'Children with ASD have complication transitioning from one academic or social activity or environment to another' (Majoko, 2016)

As in the above excerpt, some South African and Zimbabwean teachers' demonstrated understanding of autism and other DD. However, more often, their knowledge was limited and their beliefs diverged from scientific evidence, particularly on aetiology and treatment needs. For example, a *'poor diet'* (Seabi, 2010) was considered a cause of ADHD.

Conversely, teachers were aware of additional needs that pupils with DD face in the community, which impose further barriers to their learning. Environmental factors

such as poverty and unsupportive parenting were mentioned as concurrent causes of learning challenges.

Policy and incentives for IE. Barriers to implementing IE policies were reported in all seven countries of the synthesised studies. Governments were accused of not prioritising IE (Mapuranga et al., 2015; Okyere et al., 2019b) and of producing poorly defined IE policies. In South Africa, various policies aim at providing specific indications for effective inclusion, such as Outcomes-Based Education, the creation of School-Based Support Teams and District-Based Support Teams (Mohamed & Laher, 2012; Ngcobo & Muthukrishna, 2011). However, they appear scarcely implemented: teachers in several South African studies seemed unaware that 'Department of Education (2005: 15) states: *taking learners out of classes should be reduced to a minimum*' (Mohamed & Laher, 2012); moreover, relevant support teams did not assist teachers:

'PGSES [Psychological, Guidance and Special Education Services] does not visit our school ... they have never visited our school ... you call them, they do not come' (teacher; Ngcobo & Muthukrishna, 2011)

Insufficient support was also reported in a Ghanaian rural school, where education officers *'don't observe how the teachers teach'* as *'they don't care'* (Alhassan & Abosi, 2017). Combined with low wages and incentives, the lack

of supervision in the school leads to uncommitted teachers working short hours and taking ‘*the freedom to arrange or teach school subjects in a manner that suit them*’ (Alhassan & Abosi, 2017).

The only support and in-service training for IE mentioned in studies based in Ghana were offered by NGOs (Alhassan & Abosi, 2017; Okyere et al., 2019b). Some references to training provided by the Department of Education were made in Zimbabwe (Majoko, 2018) and South Africa (Lopes et al., 2009; Potgieter-Groot et al., 2012). However, although these studies were of high quality and based in schools with diverse socio-economic backgrounds, even in the above countries the training availability mentioned is not universal: in some South African semi-rural communities, teachers are ‘in dire need of professional development’ (Ngcobo & Muthukrishna, 2011).

Barriers and facilitators for inclusion within mainstream schools

Within-school interactions. Collaboration and reciprocal support between teachers were presented as IE facilitators in 11 studies. Ten of these described positive interactions, which helped teachers overcome psychological and practical challenges faced in inclusive classrooms:

‘They appreciated peer support and shared instructional strategies they employed to make inclusion work for students with IDD [DD]’ (Okyere et al., 2019b)

Two studies in South Africa (Mohamed & Laher, 2012; Potgieter-Groot et al., 2012) and one in Zimbabwe (Majoko, 2017) reported formal sharing of knowledge and strategies across all teachers, promoting a whole-school approach to inclusion:

‘The teachers started a working group to develop specific support plans for each learner experiencing barriers to learning’ (Potgieter-Groot et al., 2012)

Five studies indicated that support by special needs educators and teaching assistants in the classroom was particularly valued:

‘When asked about a time when delivering education to students with IDD [DD] in the general education classroom together with non-disabled peers went really well, some participants (n=5) discussed support from special educators’ (Okyere et al., 2019b)

However, study results also suggest that collaboration with special educators is generally insufficient, as these are scarcely available (Bannink et al., 2016; Engelbrecht et al., 2001, 2003; Mangope, 2017; Okyere et al., 2019b). Poor collaboration among teachers was also reported in one South African school, where ‘teachers in whose classes

disabled children were integrated received very little support from their colleagues’ (Ngcobo & Muthukrishna, 2011).

School culture. Inclusive school cultures were restricted to few cases, such as the whole-school approaches described above and ‘schools with a history of practicing inclusive education’ (Mukhopadhyay et al., 2019). Most often, school environments reflected histories of segregation and negative attitudes towards disability. Due to stigma towards people with disabilities in their communities, parents in South Africa, Uganda and Nigeria reported mainstream schools denying inclusion of their children with SEN (Bannink et al., 2016; Brydges & Mkandawire, 2020; Uba & Nwoga, 2016; Yssel et al., 2007). Moreover, teachers and pre-service teachers in various studies displayed fear and negative effects towards pupils with DD. In one primary school in Botswana, teachers influenced typically developing pupils to bully peers with SEN:

‘Some teachers [. . .] do not call learners with SEN by their names; they call them names such as *old woman, old man, uncle, and aunt*. Such attitude then goes to some learners, as they also would think that such names were acceptable’. (Mukhopadhyay et al., 2019)

Discourses of teachers exhibiting positive attitudes were usually still permeated with the cultural dichotomy between normal and abnormal, in contrast with the social model of disability foundational to IE (UN General Assembly, 2007). They discussed being ‘*only trained to teach normal children*’ (Engelbrecht et al., 2003), and suggested that children with SEN should be ‘*improved*’ (Ngcobo & Muthukrishna, 2011). Similar school cultures offer ‘limited opportunities for the development of a positive disabled identity’ (Ngcobo & Muthukrishna, 2011).

Many studies also described exclusionary practices towards children with DD in mainstream schools, often enacted out of lack of experience:

‘Many of the teachers did not know how to deal with learners’ problem behaviour and often send them out of the class or to the principal’s office’. (Potgieter-Groot et al., 2012)

Two studies in Ghana (Okyere et al., 2019a, 2019b), one in Nigeria (Brydges & Mkandawire, 2020) and one in Zimbabwe (Mapuranga et al., 2015) reported the use of corporal punishment, ‘disproportionally targeted’ (Okyere et al., 2019a) at children with DD due to behavioural and learning challenges:

‘*When am not able to answer question madam will cane us or when someone answers madam will say the boy who got the answer correct should take the cane and cane the people who are standing*’ (pupil with DD; Okyere et al., 2019a)

School climate for IE implementation

Teachers' longing for improvement. Opposing the negative school cultures presented, 13 studies revealed that teachers perceived a need for change in the current education provision, as they recognised 'the importance of including diverse learners in their classrooms' (Yoro et al., 2020). South African student teachers who attended teaching practice in both special and mainstream schools were critical towards segregated education, as well as exclusionary practices within mainstream schools:

'Surita bemoaned her observation of how teachers in a mainstream school sent a student out of the class for poor academic performance by asking *What is leaving him outside going to do to [help] him?*' (Walton & Rusznyak, 2014)

Teachers in mainstream schools expressed and demonstrated their efforts to include pupils with DD, recognising that learning is important for the future of pupils with DD as of their peers, as pupils themselves (Mukhopadhyay et al., 2019; Okyere et al., 2019a) and their parents (Bannink, Nalugya, & Van Hove, 2020; Brydges & Mkandawire, 2020; Uba & Nwoga, 2016; Yssel et al., 2007) highlighted:

'Teachers are trying hard to come to terms with the inclusion of intellectually challenged learners in inclusive schools and to support them'. (Mokobane, 2011)

IE compatibility with mainstream school practice. Across studies, accommodating the needs of pupils with DD was seen as requiring additional time and effort, incompatibly with the typical workflow of mainstream schools. Teachers lamented the lack of human resources, such as the limited availability of special educators who could assist them in teaching (Bannink et al., 2016; Engelbrecht et al., 2001, 2003; Mangope, 2017; Okyere et al., 2019b). In a South African school, 'a parent hired a classroom assistant for her child at her own cost' (Yssel et al., 2007). In several studies, participants explained that learners with DD require extra time and attention, for which teachers either work outside the regular timetable or neglect other pupils and sacrifice meeting teaching schedules:

'The significance of this study was to show the severe stress the teachers experience in classes with FASD [foetal alcohol spectrum disorders] learners, due to the frustration of not having enough time to spend with the other children' (Van Schalkwyk & Marais, 2017)

The above challenges were frequently discussed in relation to overcrowded classes, in which teachers are not able to effectively address individual needs:

'We are teaching 40 in a class, it is very difficult to teach an inclusive education class. I don't think we are doing justice to the learner, I think we probably be choosing between other learners and this learner'. (teacher; Mohamed & Laher, 2012)

Classroom setup and infrastructure challenges are additional barriers to teaching in general and IE in particular, as was the case of two classes being taught in the same room due to scarce availability of classrooms in a Ghanaian school (Alhassan & Abosi, 2017). In a study in Zimbabwe, all participating pupils, parents and teachers 'indicated that there were no suitable facilities' for children with intellectual disabilities (Mapuranga et al., 2015). However, such infrastructure challenges were not highlighted in South Africa.

Availability of resources and training. Mainstream schools appear poorly equipped with financial, material and training resources to implement effective IE. As well as inclusive infrastructure, they were reported to lack teaching equipment in all countries studied. In some instances, teachers and pupils bought materials at their expense:

'The special educators reported feeling frustrated as they often invested personal resources into specific teaching and learning aids to support their teaching of students with IDD [DD]' (Okyere et al., 2019b)

Despite a few mentions of beneficial training, the most frequently reported barrier to effective inclusion was unmet training needs, discussed in almost all studies. Some studies reported that pre-service training had not prepared teachers for IE of children with DD.

Two rigorous studies (Mangope et al., 2018; Walton & Rusznyak, 2014) specifically on teaching practice for student teachers, reported limitations of pre-service programmes, including inadequate mentorship. Student teachers specialising in SEN at the University of Botswana struggled in IE teaching practice, as the university programme, which focussed on single disabilities, had failed to prepare them for the variety of needs in inclusive classrooms (Mangope et al., 2018).

In-service training on IE is equally lacking in all countries where the studies were conducted and, when available, it often fails to provide specific skills and knowledge on DD.

Inner-inner setting: inclusion in the classroom. Given the nature of the school environment and through the analysis of data, a further layer of contextual information has been added here compared to the CFIR (Damschroder et al., 2009). While the school as a whole is the *Inner Setting*, this theme explores the classroom environment in more depth.

In line with school cultures presented earlier, 11 studies discussed exclusionary practices within classrooms. In some instances, teachers did not attempt to involve pupils with DD, when they spontaneously disengaged from classroom activities and 'missed the learning experience' (De Jager, 2011). Furthermore, two studies in South Africa and one in Botswana described teachers grouping children according to ability, creating stratifications that

discriminated against weaker learners, including pupils with DD (Mangope, 2017; Ngcobo & Muthukrishna, 2011; Yoro et al., 2020).

Despite these examples, teachers' attempts and strategies to promote a positive and inclusive environment were reported in 14 studies. They included de-cluttering the physical environment and reducing noise to address sensory needs and fostering inclusive relationships among pupils:

'Teachers need to educate other children and encourage them to communicate effectively with those who are different' (teacher; Mohamed & Laher, 2012)

Typically developing pupils supported their peers with DD spontaneously too, by providing emotional support and in one case even financial assistance to pay school fees (Okyere et al., 2019a), and by helping them to learn:

'My friends also help me to read and understand school work' (learner with DD; Okyere et al., 2019a)

As in the above quote, pupils with and without SEN reported being friends (Mukhopadhyay et al., 2019; Okyere et al., 2019a). Opposite views were expressed by South African parents stating that their children with SEN did not have real friendships:

'She is friendly with everybody [...] But to have an intimate friend, build an intimate friendship, is very difficult for her' (Yssel et al., 2007)

Despite positive peer interactions, 10 studies also discussed how pupils with DD were at times bullied, teased and excluded by their peers:

'The respondents further argued that the other learners in the school did not want to associate with children with ID as they sometimes give them degrading names such as [...] morons or imbecile' (Mapuranga et al., 2015)

In addition, more than half studies discussed class disruption, aggressiveness and negative reactions to events displayed by some children with DD. Together with peer victimisation, these behaviours often made teachers uncomfortable and represented another threat to positive classroom environments and the inclusion of pupils with DD.

Relevant features of teachers

Teachers' knowledge and beliefs about inclusion. In several cases, teachers in South Africa, Zimbabwe and Botswana understood IE as the promotion of a positive environment for all learners and targeting individual needs, in line with definitions given in this review and in the studies

synthesised. Teachers were able to identify key skills needed for inclusion, particularly the identification of disorders and needs, curriculum and task adaptations and behaviour management. However, studies in Ghana did not report similar reflections, and it was not unusual for teachers also in other countries to consider inclusion achieved whenever children with DD attended mainstream schools, regardless of how well their needs were met:

'The majority of respondents [parents of children with DD] reported that [...] often, no allowances or considerations were made for the children's varying needs'. (Uba & Nwoga, 2016)

In the studies synthesised, teachers presented an equal split between positive and negative attitudes towards IE. In general, it appears that while 'many teachers are keen on the concept of inclusion' (Okyere et al., 2019b), poor understanding of disability, limited time and resources and lack of skills and confidence hinder positive attitudes:

'In many cases teachers indicated that learners who experience emotional and behaviour barriers are a burden and should not be part of mainstream schools: This is not my job. I am a trained teacher and I am not qualified to identify and deal with problems of an emotional nature'. (Potgieter-Groot et al., 2012)

Teachers' skills and confidence for IE. Teachers exhibited different levels of skilfulness in IE and confidence in their ability to effectively include pupils with DD, often depending on their experience and the availability of training programmes.

Inadequate teachers' skills and confidence for IE were reported in 15 studies across countries:

'Teachers, on the other hand, felt they required more knowledge and skills to be able to include children with disabilities in school' (Bannink, Nalugya, Kawesa, et al., 2020)

Nonetheless, there was a similar number of indications that teachers' skills, confidence and attitudes towards inclusion could improve through training and, more frequently, experience.

'Five of the teachers that had over 10 years of teaching experience felt that it was their experience rather than their training that helped them cope with learners with LD [learning disability/ difficulty]' (Mohamed & Laher, 2012)

Most studies also described teachers' acquired knowledge and use of strategies to include learners with DD and meet their individual needs, such as curriculum and task adaptation, slower teaching pace, collaborative learning, peer tutoring, visual aids, reinforcement and direct teaching of social skills. Examining the specifics of such strategies is

beyond the scope of this review; these will be the focus of another article.

Teachers' relational patterns with pupils. Among teachers' *Other Personal Attributes* (Damschroder et al., 2009), their relational styles towards pupils with DD were deemed especially relevant to IE. Relationships described by teachers and pupils were variable in quality: positive in eight studies, negative in six, more ambivalent in four.

Negative relationships were usually considered a consequence of teachers' reactions to pupils' disruptiveness or aggressiveness:

'Continuing negative experiences and associated hindrances are a serious impediment to educators forming quality bonds with these learners. PP: *Children give so many problems that it is difficult to bond with them*' (Van Schalkwyk & Marais, 2017)

Positive relationships, key to promoting inclusion, appear to be fostered by teachers' empathy and compassion:

'As the teachers become more empathetic and caring, they developed a willingness to build trusting and caring relationships with these learners' (Potgieter-Groot et al., 2012)

Engaging stakeholders to implement IE

Engaging stakeholders was discussed in almost all studies. While most studies focussed on teachers' experiences, their collaboration across schools and with other stakeholders was considered crucial for successful IE.

The involvement of three main stakeholders was discussed: authorities, therapists and parents. It was recommended that governments supported schools and formulated appropriate policies where lacking, and that teachers gained skills to collaborate with authorities, to effectively implement IE. In addition, teachers and pre-service teachers valued and advocated for therapists' collaboration, as a facilitator for inclusion:

'The point of "outside help" was extended by Alice who suggested that a school could ask *a psychologist to come in once a week* and Sadie who felt that the role of the therapists in the special school she attended meant that *You don't have to struggle as a teacher by yourself*' (Walton & Rusznyak, 2014)

Across studies and countries, parents were presented as the most important teachers' collaborators for successful IE. Teachers often reported helpful interactions with families, such as employing '*their [parents'] strategies to manage and communicate with children with autism*' (Majoko, 2017). However, in one study, South African parents hinted at teachers' hostility towards parents' attempts to collaborate (Yssel et al., 2007). In South Africa (Engelbrecht et al., 2001, 2003; Mohamed & Laher, 2012), Botswana

(Mangope, 2017), Eswatini (Matsenjwa et al., 2020) and Ghana (Okyere et al., 2019b), teachers reflected on their own negative experiences, whereby parents did not reach out to teachers or respond to their collaborative efforts:

'The parents just send their children to school and say its free education as if government will provide everything for the learner. [. . .] They do not work with us in supporting the learner to overcome his/her challenges' (teacher; Matsenjwa et al., 2020)

In three instances, teachers complained that sometimes parents reacted in denial to suggestions that their child might have SEN (Engelbrecht et al., 2001; Matsenjwa et al., 2020; Mohamed & Laher, 2012). Similarly, in Nigeria, 'denial constituted a dominant way of coping for most mothers' (Uba & Nwoga, 2016).

Discussion

This systematic review aimed to synthesise stakeholder experiences, attitudes and perspectives on IE for pupils with DD in mainstream schools in sub-Saharan Africa, to explore factors that facilitate or hinder its effective implementation. The research area under review is a relatively recent field in sub-Saharan Africa, as all 32 studies identified were published after 2001, several years after 1994, when the UNESCO *Salamanca Statement* first advocated for IE (UNESCO, 1994). Generally, the reviewed studies presented rigorous methods and reporting. Results of poorer quality studies did not differ substantially from the former.

Through thematic synthesis, themes relative to all CFIR (Damschroder et al., 2009) domains were generated. In this review, *Intervention Characteristics* outlined how previous research in sub-Saharan Africa framed IE and identified its source in human rights and policy. The *Outer Setting* presented the needs of pupils with DD that schools must address for successful inclusion, and external support and guidance for IE. The *Inner Setting* described school environments, including within-school interactions, stigmatising and inclusive attitudes and practice and logistical barriers to IE under resources, training and work conditions. The analysis suggested that an additional level of contextual information within the *Inner Setting* is needed for school-based innovations: the inner-inner setting, describing the classroom environment and pupils' interactions. *Characteristics of Individuals* outlined teachers' understanding of and attitudes towards IE, their relations with pupils with DD and their skills and confidence in meeting pupils' needs. In the *Process* domain, stakeholder engagement for implementing IE was discussed.

Regardless of contextual variations in countries and communities, the notable similarity of experiences was reported across studies in all domains. Despite frequently unclear and insufficient IE policy, stakeholders' awareness

of IE benefits, and particularly rights protection, provides a favourable basis for the inclusion of pupils with DD. However, barriers were reported at the outer-setting, inner-setting and individual levels. Crucially, as suggested by the theorisation of the CFIR (Damschroder et al., 2009), the analysis indicated that barriers interact across levels.

Pupils identified and diagnosed with DD in sub-Saharan Africa tend to be those whose disabilities have substantial impacts on their daily functioning. Pupils in the schools studied presented complex emotional, social and learning needs which mainstream teachers often felt unable to address. Consequently, even in the rare instances when they are included in mainstream classrooms, pupils with DD in sub-Saharan Africa still face some exclusion when they are not able to fully participate in the lesson with their peers. A review of studies conducted in other continents, mostly in high-income countries, elicited similar conclusions specifically concerning IE for pupils with autism: stakeholders reported as discriminatory the excessive reliance on assistants for instructing learners with autism, caused by teachers' real or perceived lack of knowledge and skills to include them in their lesson (Roberts & Simpson, 2016). However, while in sub-Saharan Africa these experiences are common across DD, they may be more disorder-specific in high-income countries: for instance, a representative sample of Danish teachers demonstrated good knowledge of inclusive strategies for pupils with ADHD (Mohr-Jensen et al., 2019).

At the classroom level, reviewed studies reported pupils' disruptiveness or aggressiveness as a cause for individual-level barriers to inclusion, namely negative teachers' attitudes, low self-confidence and poorer teacher-pupil relationships. Similarly, quantitative studies in South Africa (Engelbrecht et al., 2003) and Botswana (Chhabra et al., 2010) found inappropriate and uncontrolled behaviour to be associated with teachers' negative attitudes towards IE. In high-income countries, where similar challenges were reported, behaviour management responsibilities fall onto special educators (Roberts & Simpson, 2016), who are rarely available in sub-Saharan Africa (Engelbrecht et al., 2003; Okyere et al., 2019b).

At the school level, negative attitudes are fostered by cultural values based on community stigma towards DD, and a tradition of corporal punishment (Mapuranga et al., 2015; Okyere et al., 2019a; 2019b). The UNESCO *Global Education Monitoring Report 2020* identifies corporal punishment in schools as a global problem, of which vulnerable children are victims more often than their peers (UNESCO Global Education Monitoring Report Team, 2020). In line with the report, this review suggests that traditional behaviour management methods are due to large class sizes, scarce teachers' skills, limited support from specialists and a lack of adequate infrastructure and resources, demonstrating low support at the outer-setting level, specifically from authorities.

Making sufficient human, financial and infrastructure resources available is a crucial long-term goal for effective and sustainable IE (UNESCO Global Education Monitoring Report Team, 2020). However, in line with previous research on including children with any disabilities (Asamoah et al., 2018; Chhabra et al., 2010; Franck & Joshi, 2017; Kuyini et al., 2020; Mukhopadhyay, 2014), a key first step identified in this review is addressing teachers' training and supervision needs while also improving their work conditions and providing incentives. This was attempted in recent intervention studies in sub-Saharan Africa aimed at enhancing teachers' practice (Conn, 2017; Evans & Acosta, 2020). As previously suggested (Okyere et al., 2019c), this review indicates that teachers frequently lack understanding of IE principles, such as adaptations to individual learning needs. Appointed supervisors are reportedly unsupportive and equally untrained (Alhassan & Abosi, 2017; Ngcobo & Muthukrishna, 2011; Okyere et al., 2019b). While pre-service training programmes need a clearer focus on inclusion and experiential knowledge of DD (Mangope et al., 2018; Walton & Rusznyak, 2014), IE in-service training programmes are largely unavailable, as confirmed by World Bank data (Wodon et al., 2018): IE skills are among the least taught in professional development in sub-Saharan Africa, where less than 10% of teachers have attended an IE training programme. This review further suggests that, when available, IE in-service training programmes fail to convey DD-specific knowledge and skills (Majoko, 2018; Seabi, 2010).

Conversely, a powerful opportunity to implement IE arises due to the willingness of teachers to include pupils with DD, previously highlighted for children with disabilities more generally (Asamoah et al., 2018; Franck & Joshi, 2017; Magumise & Sefotho, 2020; Mukhopadhyay, 2014), and to meet their learning, social and emotional needs. As a scoping review suggested (Okyere et al., 2019c), many teachers demonstrate some understanding of DD and IE strategies and the ability to foster inclusive environments, acquired mostly through experience. Collaboration between teachers, who share knowledge and help each other implement such strategies, can further promote inclusion.

The work of NGOs in sub-Saharan Africa is another opportunity for addressing training and support needs (Alhassan & Abosi, 2017; Okyere et al., 2019b). In line with implementation science (Damschroder et al., 2009; Powell et al., 2015), this review suggests that engaging all stakeholders is a key strategy for implementing IE. For instance, NGOs can provide in-service training programmes and resources. However, to ensure sustainability of IE, the main source of support should be national authorities. An analysis of education policies in Europe indicated that specific policies on IE and those including a clear definition of SEN and guidance on individualised learning outcomes, support for teachers and parental engagement, are key to promote IE for pupils with DD

(van Kessel et al., 2021). This review suggests that sub-Saharan African governments are yet to formulate similar policies to support IE implementation.

Limitations and future research

The main limitation to the results presented is the limited variety and comprehensiveness of settings and stakeholders. Most studies were conducted in the southern region of sub-Saharan Africa, with South Africa accounting for half of the research included, possibly limiting the transferability of results to other countries and communities. However, eastern and western regions were somewhat represented, and similarities across the studies synthesised suggest that comparable experiences may be reported in other sub-Saharan African countries.

Compared to teachers' perspectives, experiences of learners with DD, their parents and other stakeholders were under-represented, leading to a partial account of IE for pupils with DD. This may be an issue in interpreting the synthesis, as teachers' reported experiences and their observed practice may be subject to social desirability bias. In fact, some studies with teacher participants described a much more inclusive environment than those with pupil and parent participants. However, this difference could also be due to contextual changes across studies and, in general, teachers' views appear nuanced and honest about IE challenges. Notably, when children and parents' views were explored, participants were usually recruited from schools. Future research should explore attitudes towards mainstream education of the majority of children with DD in sub-Saharan Africa, who cannot access school or drop out, and their parents.

As only 25% of the studies reviewed included data on secondary schools, the account presented is likely to be more reflective of primary school settings. Globally, children with difficulties in cognition, communication and self-care are the least represented children with disabilities in secondary schools (UNICEF, 2021). Therefore, while some of the findings of this review will be relevant to secondary education, more research is needed to explore such disparity in sub-Saharan Africa and any potential additional barriers that may account for it.

While no language excluding criteria were applied in study selection, a limitation of our review methodology is the inability of the database search to comprehensively retrieve studies without an English title and/or abstract, as all keywords were in English. However, this limitation was mitigated at least in part using subject headings in Ovid databases and through forward and backward citation checks.

Conclusion

The findings from this systematic review indicate that the context for IE of children with DD in sub-Saharan Africa

presents multiple barriers and facilitators at the community, school, class and individual levels. To effectively implement IE for pupils with DD in the region, the authors recommend capitalising on facilitators, such as teachers' will to promote inclusion and the efforts of NGOs. Key barriers that need to be addressed are the scarcity of equipment and training and supervision programmes within schools, as well as stigma towards DD in the community more broadly. Despite the limited financial resources available in the region, these implementation efforts should be prioritised, for compliance with international policy and protection of the rights of children with DD.

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Supplemental material

Supplemental material for this article is available online.

References

- Abosi, O. (2007). Educating children with learning disabilities in Africa. *Learning Disabilities Research & Practice*, 22(3), 196–201. <https://doi.org/10.1111/j.1540-5826.2007.00242.x>
- Abubakar, A., Ssewanyana, D., & Newton, C. R. (2016). A systematic review of research on autism spectrum disorders in Sub-Saharan Africa. *Behavioural Neurology*, 2016, Article 3501910. <https://doi.org/10.1155/2016/3501910>
- Adera, B. A., & Asimeng-Boahene, L. (2011). The perils and promises of inclusive education in Ghana. *The Journal*

- of *International Association of Special Education*, 12(1), 28–32.
- Ajuwon, P. M., & Brown, I. (2012). Family quality of life in Nigeria. *Journal of Intellectual Disability Research*, 56(1), 61–70. <https://doi.org/10.1111/j.1365-2788.2011.01487.x>
- Ajuwon, P. M., & Chitiyo, G. (2016). Survey of the use of assistive technology in Schools in Nigeria. *Journal of the International Association of Special Education*, 16(1), 4–13.
- Akol, A., Engebretsen, I. M., Skylstad, V., Nalugya, J., Ndeezi, G., & Tumwine, J. (2015). Health managers' views on the status of national and decentralized health systems for child and adolescent mental health in Uganda: A qualitative study. *Child and Adolescent Psychiatry and Mental Health*, 9, Article 54. <https://doi.org/10.1186/s13034-015-0086-z>
- Alhassan, A. R. K., & Abosi, C. O. (2017). Teachers' pedagogical competence in adapting curricula for children with learning difficulties (LD) in primary schools in Ghana. *Journal of the American Academy of Special Education Professionals*, 41, Article 61.
- Ambikile, J. S., & Outwater, A. (2012). Challenges of caring for children with mental disorders: Experiences and views of caregivers attending the outpatient clinic at Muhimbili National Hospital, Dar es Salaam-Tanzania. *Child and Adolescent Psychiatry and Mental Health*, 6(1), 1–11. <https://doi.org/10.1186/1753-2000-6-16>
- Andrews, C., Kakooza-Mwesige, A., Almeida, R., Swartling Peterson, S., Wabwire-Mangen, F., Eliasson, A. C., & Forssberg, H. (2020). Impairments, functional limitations, and access to services and education for children with cerebral palsy in Uganda: A population-based study. *Developmental Medicine and Child Neurology*, 62(4), 454–462. <https://doi.org/10.1111/dmcn.14401>
- Asamoah, E., Ofori-Dua, K., Cudjoe, E., Abdullah, A., & Nyarko, J. A. (2018). Inclusive education: Perception of visually impaired students, students without disability, and teachers in Ghana. *Sage Open*, 8(4), 2158244018807791. <https://doi.org/10.1177/2158244018807791>
- Bakare, M. O., Agomoh, A. O., Ebigbo, P. O., Eaton, J., Okonkwo, K. O., Onwukwe, J. U., & Onyeama, G. M. (2009). Etiological explanation, treatability and preventability of childhood autism: A survey of Nigerian healthcare workers' opinion. *Annals of General Psychiatry*, 8(1), 1–8. <https://doi.org/10.1186/1744-859X-8-6>
- Bakare, M. O., Onu, J. U., Bello-Mojeed, M. A., Okidegbe, N., Onu, N. N., & Munir, K. M. (2022). Picture of autism spectrum disorder (ASD) research in West Africa – A scoping review. *Research in Autism Spectrum Disorders*, 90, Article 101888. <https://doi.org/10.1002/aur.1766>
- Bannink, F., Idro, R., & Van Hove, G. (2016). Teachers' and parents' perspectives on inclusive education for children with spina bifida in Uganda. *Journal of Childhood & Developmental Disorders*, 2(2), 2472–1786.
- Bannink, F., Nalugya, R., Kawesa, E., Nambemba, H., Nizeyimana, P., Ojok, P., & Seeley, J. (2020). 'Obuntu Bulamu' – Development and testing of an indigenous intervention for disability inclusion in Uganda. *Scandinavian Journal of Disability Research*, 22(1), 403–416. <https://doi.org/10.16993/sjdr.697>
- Bannink, F., Nalugya, R., & Van Hove, G. (2020). 'They give him a chance' – Parents' perspectives on disability and inclusive primary education in Uganda. *International Journal of Disability, Development and Education*, 67(4), 357–375. <https://doi.org/10.1080/1034912X.2019.1593326>
- Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, 11(4), 589–597. <https://doi.org/10.1080/2159676X.2019.1628806>
- Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative Research in Psychology*, 12(2), 202–222. <https://doi.org/10.1080/14780887.2014.955224>
- Brydges, C., & Mkandawire, P. (2017). Perceptions and concerns about inclusive education among students with visual impairments in Lagos, Nigeria. *International Journal of Disability, Development and Education*, 64(2), 211–225. <https://doi.org/10.1080/1034912X.2016.1183768>
- Brydges, C., & Mkandawire, P. (2020). Perceptions and experiences of inclusive education among parents of children with disabilities in Lagos, Nigeria. *International Journal of Inclusive Education*, 24(6), 645–659. <https://doi.org/10.1080/13603116.2018.1480669>
- Chataika, T., Mckenzie, J. A., Swart, E., & Lyner-Cleophas, M. (2012). Access to education in Africa: Responding to the United Nations convention on the rights of persons with disabilities. *Disability & Society*, 27(3), 385–398. <https://doi.org/10.1080/09687599.2012.654989>
- Chhabra, S., Srivastava, R., & Srivastava, I. (2010). Inclusive education in Botswana: The perceptions of school teachers. *Journal of Disability Policy Studies*, 20(4), 219–228. <https://doi.org/10.1177/1044207309344690>
- Colombi, C., & Ghaziuddin, M. (2017). Early intervention for children with autism spectrum disorder in low-resource countries. *Journal of the American Psychiatric Nurses Association*, 23(5), 344–345. <https://doi.org/10.1177/1078390317717329>
- Conn, K. M. (2017). Identifying effective education interventions in Sub-Saharan Africa: A meta-analysis of impact evaluations. *Review of Educational Research*, 87(5), 863–898. <https://doi.org/10.3102/003465431712025>
- Critical Appraisal Skills Programme. (2018). *CASP Qualitative Research Checklist*. <https://casp-uk.net/casp-tools-checklists/>
- Dambi, J. M., Jelsma, J., & Mlambo, T. (2015). Caring for a child with Cerebral Palsy: The experience of Zimbabwean mothers. *African Journal of Disability*, 4(1), Article 168. <https://doi.org/10.520/EJC175927>
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4(1), 1–15. <https://doi.org/10.1186/1748-5908-4-50>
- De Jager, P. S. (2011). The identification of sensory processing difficulties of learners experiencing Asperger's Syndrome (AS) in two mainstream Grade R classes. *South African Journal of Childhood Education*, 1(2), 11–26.
- De Jager, P., & Condy, J. (2017). The influence of executive function challenges on the behavioural adaptation of one learner with autism spectrum disorder. *South African Journal of Childhood Education*, 7(1), 1–11. <https://doi.org/10.520/EJC-7e57ebea3>

- Divan, G., Bhavnani, S., Leadbitter, K., Ellis, C., Dasgupta, J., Abubakar, A., Elsabbagh, M., Hamdani, S. U., Servili, C., Patel, V., & Green, J. (2021). Annual research review: Achieving universal health coverage for young children with autism spectrum disorder in low-and middle-income countries: A review of reviews. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *62*(5), 514–535. <https://doi.org/10.1111/jcpp.13418>
- Engelbrecht, P., Oswald, M., Swart, E., & Eloff, I. (2003). Including learners with intellectual disabilities: Stressful for teachers? *International Journal of Disability, Development and Education*, *50*(3), 293–308. <https://doi.org/10.1080/1034912032000120462>
- Engelbrecht, P., Swart, E., & Eloff, I. (2001). Stress and coping skills of teachers with a learner with Down's syndrome in inclusive classrooms. *South African Journal of Education*, *21*(4), 256–259.
- Evans, D., & Acosta, A. M. (2020). *Education in Africa: What are we learning?* Center for Global Development. <https://www.cgdev.org/publication/education-africa-what-are-we-learning>
- Federal Democratic Republic of Ethiopia Ministry of Education. (2015). *A Master plan for special needs education/inclusive education in Ethiopia 2016-2025*. <https://planipolis.iiep.unesco.org/en/2016/master-plan-special-needs-education-inclusive-education-ethiopia-2016-2025-6465>
- Federal Democratic Republic of Ethiopia Ministry of Education. (2020). *Education sector development programme V 2015/16-2019/20*. [https://www.google.com/search?client=safari&rls=en&q=FDR+Ethiopia+Ministry+of+Education.+Education+Sector+Development+Programme+V+2015/16-2019/20+\(2015\)&ie=UTF-8&oe=UTF-8](https://www.google.com/search?client=safari&rls=en&q=FDR+Ethiopia+Ministry+of+Education.+Education+Sector+Development+Programme+V+2015/16-2019/20+(2015)&ie=UTF-8&oe=UTF-8)
- Franck, B., & Joshi, D. K. (2017). Including students with disabilities in education for all: Lessons from Ethiopia. *International Journal of Inclusive Education*, *21*(4), 347–360. <https://doi.org/10.1080/13603116.2016.1197320>
- Franz, L., Chambers, N., von Isenburg, M., & de Vries, P. J. (2017). Autism spectrum disorder in Sub-Saharan Africa: A comprehensive scoping review. *Autism Research: Official Journal of the International Society for Autism Research*, *10*(5), 723–749. <https://doi.org/10.1002/aur.1766>
- Getanda, E. M., Vostanis, P., & O'Reilly, M. (2017). Exploring the challenges of meeting child mental health needs through community engagement in Kenya. *Child and Adolescent Mental Health*, *22*(4), 201–208. <https://doi.org/10.1111/camh.12233>
- Global Research on Developmental Disabilities Collaborators. (2018). Developmental disabilities among children younger than 5 years in 195 countries and territories, 1990–2016: A systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Global Health*, *6*(10), e1100–e1121. [https://doi.org/10.1016/S2214-109X\(18\)30309-7](https://doi.org/10.1016/S2214-109X(18)30309-7)
- Gona, J. K., Newton, C. R., Rimba, K. K., Mapenzi, R., Kihara, M., Vijver, F. V., & Abubakar, A. (2016). Challenges and coping strategies of parents of children with autism on the Kenyan coast. *Rural and Remote Health*, *16*(2), Article 3517.
- Hui, N., Vickery, E., Njelesani, J., & Cameron, D. (2018). Gendered experiences of inclusive education for children with disabilities in West and East Africa. *International Journal of Inclusive Education*, *22*(5), 457–474. <https://doi.org/10.1080/13603116.2017.1370740>
- Ireri, N. W., White, S. W., & Mwayo, A. W. (2019). Treating anxiety and social deficits in children with autism spectrum disorder in two schools in Nairobi, Kenya. *Journal of Autism and Developmental Disorders*, *49*(8), 3309–3315. <https://doi.org/10.1007/s10803-019-04045-6>
- Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., Rohde, L. A., Srinath, S., Ulkuer, N., & Rahman, A. (2011). Child and adolescent mental health worldwide: Evidence for action. *The Lancet*, *378*(9801), 1515–1525. [https://doi.org/10.1016/S0140-6736\(11\)60827-1](https://doi.org/10.1016/S0140-6736(11)60827-1)
- Kleintjes, S., Lund, C., Flisher, A. J., & MHAPP Research Programme Consortium. (2010). A situational analysis of child and adolescent mental health services in Ghana, Uganda, South Africa and Zambia. *African Journal of Psychiatry*, *13*(2), 132–139. <https://doi.org/10.5200/EJC72789>
- Kuyini, A. B., Desai, I., & Sharma, U. (2020). Teachers' self-efficacy beliefs, attitudes and concerns about implementing inclusive education in Ghana. *International Journal of Inclusive Education*, *24*(14), 1509–1526. <https://doi.org/10.1080/13603116.2018.1544298>
- Lesevane, M., Mandende, P., Makgato, M., & Cekiso, M. (2018). Dyslexic learners' experiences with their peers and teachers in special and mainstream primary schools in North-West Province. *African Journal of Disability*, *7*, Article 363.
- Lopes, T., Eloff, I., Howie, S., & Maree, J. G. (2009). South African teachers' experiences of children in their classrooms who may have ADHD. *Journal of Psychology in Africa*, *19*(3), 347–354. <https://doi.org/10.1080/14330237.2009.10820301>
- Magumise, J., & Sefotho, M. M. (2020). Parent and teacher perceptions of inclusive education in Zimbabwe. *International Journal of Inclusive Education*, *24*(5), 544–560. <https://doi.org/10.1080/13603116.2018.1468497>
- Majoko, T. (2016). Inclusion of children with autism spectrum disorders: Listening and hearing to voices from the grassroots. *Journal of Autism and Developmental Disorders*, *46*(4), 1429–1440. <https://doi.org/10.1007/s10803-015-2685-1>
- Majoko, T. (2017). Practices that support the inclusion of children with autism spectrum disorder in mainstream early childhood education in Zimbabwe. *SAGE Open*, *7*(3), 2158244017730387. <https://doi.org/10.1177/2158244017730387>
- Majoko, T. (2018). Inclusion of children with autism spectrum disorders in mainstream primary school classrooms: Zimbabwean teachers' experiences. *International Journal of Special Education*, *33*(3), 630–656.
- Majoko, T. (2019). Teacher key competencies for inclusive education: Tapping pragmatic realities of Zimbabwean special needs education teachers. *Sage Open*, *9*(1), 2158244018823455. <https://doi.org/10.1177/2158244018823455>
- Mangope, B. (2017). Inclusive practices for learners with intellectual disabilities in primary schools in Botswana: What are teachers doing to enhance inclusion. *Mosenodi Journal*, *20*(1), 32–47.
- Mangope, B., Otukile-Mongwaketse, M., Dinama, B., & Kuyini, A. B. (2018). Teaching practice experiences in inclusive classrooms: The voices of University of Botswana special

- education student teachers. *International Journal of Whole Schooling*, 14(1), 57–92.
- Mapuranga, B., Dumba, O., & Musodza, B. (2015). The impact of Inclusive Education (IE) on the rights of children with Intellectual Disabilities (IDs) in Chegutu. *Journal of Education and Practice*, 6(30), 214–223.
- Matsenjwa, H., Ntinda, K., & Makondo, D. (2020). Teachers' experiences of learners with intellectual disabilities in primary schools of Eswatini. *UNESWA Journal of Education (UJOE)*, 3. <http://ojs.uneswa.ac.sz/index.php/ujoe/article/view/444>
- McKenzie, J. A., McConkey, R., & Adnams, C. (2013). Intellectual disability in Africa: Implications for research and service development. *Disability and Rehabilitation*, 35(20), 1750–1755. <https://doi.org/10.3109/09638288.2012.751461>
- Mohamed, Z., & Laher, S. (2012). Exploring foundation phase school teachers' perceptions of learning difficulties in two Johannesburg schools. *Journal of Child and Adolescent Mental Health*, 24(2), 133–147. <https://doi.org/10.2989/17280583.2012.735500>
- Moher, D., Liberati, A., Tetzlaff, J., & Altman, D. G., & Prisma Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *PLoS Medicine*, 6(7), Article e1000097. <https://doi.org/10.1371/journal.pmed.1000097>
- Mohr-Jensen, C., Steen-Jensen, T., Bang-Schnack, M., & Thingvad, H. (2019). What do primary and secondary school teachers know about ADHD in children? Findings from a systematic review and a representative, nationwide sample of Danish teachers. *Journal of Attention Disorders*, 23(3), 206–219. <https://doi.org/10.1177/1087054715599206>
- Mokobane, S. Z. (2011). The academic engagement of intellectually challenged learners in inclusive schools: A case study. *Cypriot Journal of Educational Sciences*, 6(2), 83–90.
- Mukhopadhyay, S. (2014). Botswana primary schools teachers' perception of inclusion of learners with special educational needs. *Journal of Research in Special Educational Needs*, 14(1), 33–42. <https://doi.org/10.1111/j.1471-3802.2012.01269.x>
- Mukhopadhyay, S., Mangope, B., & Moorad, F. (2019). Voices of the voiceless: Inclusion of learners with special education needs in Botswana primary schools. *Exceptionality*, 27(3), 232–246. <https://doi.org/10.1080/09362835.2018.1470446>
- National Institute for Health Research. (n.d.). *PROSPERO, International prospective register of systematic reviews*. <https://www.crd.york.ac.uk/prospero/>
- Ngcobo, J., & Muthukrishna, N. (2011). The geographies of inclusion of students with disabilities in an ordinary school. *South African Journal of Education*, 31(3), 357–368. <https://doi.org/10.15700/saje.v31n3a541>
- Nigeria Federal Ministry of Education. (2015). *National policy on special needs education in Nigeria*. https://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/nigeria_special_needs_policy.pdf
- Okyere, C., Aldersey, H. M., & Lysaght, R. (2019a). The experiences of children with intellectual and developmental disabilities in inclusive schools in Accra, Ghana. *African Journal of Disability*, 8, Article 542. <https://doi.org/10.52014/EJC-18caea5621>
- Okyere, C., Aldersey, H. M., & Lysaght, R. (2019b). The experiences of teachers of children with intellectual and developmental disabilities in inclusive schools in Accra, Ghana. *Journal of Research in Special Educational Needs*, 19(4), 283–294. <https://doi.org/10.1111/1471-3802.12447>
- Okyere, C., Aldersey, H. M., Lysaght, R., & Sulaiman, S. K. (2019c). Implementation of inclusive education for children with intellectual and developmental disabilities in African countries: A scoping review. *Disability and Rehabilitation*, 41(21), 2578–2595. <https://doi.org/10.1080/09638288.2018.1465132>
- Omede, A. A. (2016). Policy framework for inclusive education in Nigeria: Issues and challenges. *Public Policy and Administration Research*, 6(5), 33–38.
- Otukile-Mongwaketse, M., Mangope, B., & Kuyini, A. B. (2016). Teachers' understandings of curriculum adaptations for learners with learning difficulties in primary schools in Botswana: Issues and challenges of inclusive education. *Journal of Research in Special Educational Needs*, 16(3), 169–177. <https://doi.org/10.1111/1471-3802.12069>
- Potgieter-Groot, L., Visser, M., & Lubbe-de Beer, C. (2012). Emotional and behavioural barriers to learning and development in the inclusive education classrooms in South Africa: Developing a training programme for teachers. *Journal of Child and Adolescent Mental Health*, 24(1), 59–71. <https://doi.org/10.2989/17280583.2011.639775>
- Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., Proctor, E. K., & Kirchner, J. E. (2015). A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. *Implementation Science*, 10(1), Article 21. <https://doi.org/10.1186/s13012-015-0209-1>
- Roberts, J., & Simpson, K. (2016). A review of research into stakeholder perspectives on inclusion of students with autism in mainstream schools. *International Journal of Inclusive Education*, 20(10), 1084–1096. <https://doi.org/10.1080/13603116.2016.1145267>
- Schlebusch, L., & Dada, S. (2018). Positive and negative cognitive appraisal of the impact of children with autism spectrum disorder on the family. *Research in Autism Spectrum Disorders*, 51, 86–93. <https://doi.org/10.1016/j.rasd.2018.04.005>
- Schlebusch, L., Dada, S., & Samuels, A. E. (2017). Family quality of life of South African families raising children with autism spectrum disorder. *Journal of Autism and Developmental Disorders*, 47(7), 1966–1977. <https://doi.org/10.1007/s10803-017-3102-8>
- Seabi, J. (2010). Foundation phase educators' perceptions of attention deficit hyperactivity disorder at a mainstream primary school. *South African Journal of Higher Education*, 24(4), 616–629. <https://doi.org/10.52014/EJC37627>
- South Africa Federal Ministry of Education. (2015). *Special needs education: Education white paper 6*. <https://www.gov.za/documents/special-needs-education-education-white-paper-6>
- Stone-MacDonald, A. (2012). Cultural beliefs about disability in practice: Experiences at a special school in Tanzania. *International Journal of Disability, Development and Education*, 59(4), 393–407. <https://doi.org/10.1080/1034912X.2012.723947>

- Tekola, B., Baheretibeb, Y., Roth, I., Tilahun, D., Fekadu, A., Hanlon, C., & Hoekstra, R. A. (2016). Challenges and opportunities to improve autism services in low-income countries: Lessons from a situational analysis in Ethiopia. *Global Mental Health (Cambridge, England)*, 3, Article e21. <https://doi.org/10.1017/gmh.2016.17>
- Tekola, B., Girma, F., Kinf, M., Abdurahman, R., Tesfaye, M., Yenus, Z., WHO CST Team Salomone, E., Pacione, L., Fekadu, A., Servili, C., Hanlon, C., & Hoekstra, R. A. (2020). Adapting and pre-testing the World Health Organization's Caregiver Skills Training programme for autism and other developmental disorders in a very low-resource setting: Findings from Ethiopia. *Autism: The International Journal of Research and Practice*, 24(1), 51–63. <https://doi.org/10.1177/1362361319848532>
- Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8(1), 1–10. <https://doi.org/10.1186/1471-2288-8-45>
- Tilahun, D., Hanlon, C., Fekadu, A., Tekola, B., Baheretibeb, Y., & Hoekstra, R. A. (2016). Stigma, explanatory models and unmet needs of caregivers of children with developmental disorders in a low-income African country: A cross-sectional facility-based survey. *BMC Health Services Research*, 16(1), Article 152. <https://doi.org/10.1186/s12913-016-1383-9>
- Tong, A., Flemming, K., McInnes, E., Oliver, S., & Craig, J. (2012). Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Medical Research Methodology*, 12(1), 1–8. <https://doi.org/10.1186/1471-2288-12-181>
- Uba, C. D., & Nwoga, K. A. (2016). Understanding stigma from a sociocultural context: Mothers' experience of stigma directed towards children with special educational needs. *International Journal of Inclusive Education*, 20(9), 975–994. <https://doi.org/10.1080/13603116.2016.1145259>
- UNESCO. (1994). *The Salamanca Statement and framework for action on special needs education*. UNESCO Digital Library. <https://unesdoc.unesco.org/ark:/48223/pf0000098427>
- UNESCO Global Education Monitoring Report Team. (2020). *Global education monitoring report summary, 2020: Inclusion and education: All means all*. UNESCO Digital Library. <https://unesdoc.unesco.org/ark:/48223/pf0000373721>
- UN General Assembly. (2007). *Convention on the Rights of Persons with Disabilities (CRPD)*. United Nations Enable.
- United Nations Children's Fund. (2021). *Seen, counted, included: Using data to shed light on the well-being of children with disabilities*. UNICEF. <https://data.unicef.org/resources/children-with-disabilities-report-2021/>
- United Republic of Tanzania Ministry of Education. (2017). *Education sector development plan (2016/17-2020/21)*. <https://www.globalpartnership.org/sites/default/files/2019-04-gpe-tanzania-esp.pdf>
- Van der Linde, J., Erasmus, S., & Kritzinger, A. (2019). Profiles of public and private autism-specific schools in Gauteng. *South African Journal of Childhood Education*, 9(1), 1–9. <https://doi.org/10.520/EJC-1f8f86ce86>
- van Kessel, R., Hrzic, R., Cassidy, S., Brayne, C., Baron-Cohen, S., Czabanowska, K., & Roman-Urrestarazu, A. (2021). Inclusive education in the European Union: A fuzzy-set qualitative comparative analysis of education policy for autism. *Social Work in Public Health*, 36(2), 286–299. <https://doi.org/10.1080/19371918.2021.1877590>
- Van Schalkwyk, G. I., Beyer, C., & de Vries, P. J. (2016). South Africa and autism. In F. Volkmar (Eds.), *Encyclopedia of autism spectrum disorders*. Springer. https://doi.org/10.1007/978-1-4614-6435-8_102111-1
- Van Schalkwyk, I., & Marais, S. (2017). Educators' relational experiences with learners identified with fetal alcohol spectrum disorder. *South African Journal of Education*, 37(3), 1–9. <https://doi.org/10.520/EJC-9b4a69aa3>
- Walton, E., & Rusznyak, L. (2014). Affordances and limitations of a special school practicum as a means to prepare pre-service teachers for inclusive education. *International Journal of Inclusive Education*, 18(9), 957–974. <https://doi.org/10.1080/13603116.2013.872203>
- Wodon, Q., Male, C., Montenegro, C., & Nayihouba, A. (2018). *The challenge of inclusive education in Sub-Saharan Africa*. World Bank. <https://elibrary.worldbank.org/doi/abs/10.1596/31005>
- World Bank. (2018). *World development report 2018: Learning to realize education's promise*. <https://www.worldbank.org/en/publication/wdr2018>
- Yoro, A. J., Fourie, J. V., & van der Merwe, M. (2020). Learning support strategies for learners with neurodevelopmental disorders: Perspectives of recently qualified teachers. *African Journal of Disability*, 9, 561–510. <https://doi.org/10.4102/ajod.v9i0.561>
- Yssel, N., Engelbrecht, P., Oswald, M. M., Eloff, I., & Swart, E. (2007). Views of inclusion: A comparative study of parents' perceptions in South Africa and the United States. *Remedial and Special Education*, 28(6), 356–365. <https://doi.org/10.1177/07419325070280060501>