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Educational inclusion of deaf children: Current policy, practices, and future possibilities.

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Abstract

This paper examines policies and practices of inclusive education for young deaf children in Ghana. Though existing Government policy promotes the principles and implementation of educational inclusion of all children in Ghana, caregivers often encounter significant challenges ensuring access to early years' education for their deaf children. We used Bronfenbrenner's (2005) bioecological systems theory and interviewed 15 educators of deaf children and nine hearing-health clinicians, to capture different knowledge, experience, and perspectives on policy, practice, and inclusive approaches to deaf children's education. We ask: a) How do teachers, clinicians, and caregivers connect to promote early childhood care education (ECCE) for young deaf preschoolers in Ghana? and b) What resources and precarities are available to educators of

deaf children and hearing-health clinicians in sustaining inclusive educational practices across urban and rural contexts in Ghana? We address these unanswered questions about the potential pathway to bring about changes in policy and practice in promoting successful inclusive education for deaf children in Ghana. Implications for national and international policy and practice of ECCE for deaf children are discussed and recommendations are made.

Introduction

Ghana's 2015 policy on the practice of educational inclusion of learners with disabilities, including deaf childrenⁱ, is drawn from, and modeled along global international laws and declarations and national commitments to the provision of early childhood care, development, and education for all children. This frame of reference includes the United Nations Convention on the Rights of the Child (United Nations, 1989), the 1990 World Conference on Education for All (UNESCO, 1990), the 1994 Salamanca Statement and Framework for Action (UNESCO, 1994), the Millennium Development Goals (2000), the Convention on the Rights of Persons with Disabilities (United Nations, 2006), and recently, the United Nations Sustainable Development Goals (United Nations, 2015) that map out ambitious agenda for member nations to strive to adopt as a matter of policy to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' (United Nations, 2015) and to encourage and facilitate the participation of parents, communities, and organizations of persons with disabilities in the planning and decision-making processes concerning provision for special educational needs (UNESCO, 1994).

The current policy framework for the educational inclusion of children with disabilities aligns with the global Education for All agenda. That agenda seeks to address the expansion of

early childhood care and development (ECCD) for all children in nations throughout the world (UNESCO, 2000). Specifically, target 4.2 of the United Nations Sustainable Development Goals (SDGs) urges member countries to ensure that by 2030, all girls and boys have access to quality (ECCD) and pre-primary education (Lynch, et. al., 2018; United Nations, 2015).

This study aims to first, examine the current intention and enactment of Government policy concerning the experiences of deaf educators and hearing-health practitioners. Second, we examine the possibilities for change – specifically, how policy-makers and practitioners envisage the future of IE for deaf children in Ghana. To examine these issues we interviewed 15 educators of deaf children and nine hearing-health clinicians (Table 1) to capture different knowledge, experience, and perspectives on policy, practice, and inclusive approaches to deaf children’s education; and the connection between teachers, clinicians, and parents/caregivers in promoting ECCE for young deaf preschoolersⁱⁱ. Questions to be answered in this study are: a) How do teachers, clinicians, and parents/caregivers connect to promote ECCE for young deaf preschoolers in Ghana? and b) What resources and precarities are available to educators of deaf children and hearing-health clinicians in sustaining inclusive educational practices across urban and rural contexts in Ghana? We address these unanswered questions about the potential pathway to bring about changes in policy and practice.

Theoretical framework

We took a bioecological approach (Bronfenbrenner, 2005) to specifically illustrate the proximal and distal environmental factors (excluding the microsystem because that was not the focus of our study) of mesosystem, exosystem, and macrosystem to capture different knowledge, experience, and perspectives on policy, practice, and the connection between teachers, clinicians,

and parents/caregivers in the promotion of ECCE for young deaf preschoolers (Woodhead, et. al., 2014). We also highlighted the precarities of the context, and the resources available. The proximal entry points are the programs in which children participate (McLinden, et. al., 2018), and they include: The *microsystem* which is the day-to-day contexts of children's lives (home, school, community) and the relationships and interactions within that context that involve the child. Examples in the Ghanaian system include interactions in the home between the child and their family in their day-to-day activities like play, and household chores. The *mesosystem* involves the interaction, interplay, and processes that take place between the different environments (microsystems) surrounding the child. An example in Ghana is when the deaf child's family meets to interact with the schools for the deaf or clinic on the progress of the child, or other families to learn about deaf children. The distal entry points (McLinden, et. al., 2018) are: The *exosystem* which refers to the interaction, interplay, and processes that take place between two or more environments that are external to, but indirectly influence the individual child. For example, the parents' engagement with schools and/or clinics, and the communication between schools and the hospitals/clinics on deaf children. The *macrosystem* refers to the overarching context of a given society including institutional and policy influence, societal infrastructure, ways of life, culture, belief systems, and resource dynamics. For example, the Government of Ghana's policy on free senior high education for all children could be considered a macrosystem since it affects the children though the children are not involved in that policy-making.

Ghana's Pre-independence Legislations on Inclusive Education

Ghana was the first sub-Saharan African (SSA) country to pass national legislation on universal access to early childhood educational inclusion (Kabay, et. al., 2017). Ghana's attempt at developing legislation and policies on inclusive education for all learners at the Basic Education level dates as far back as pre-independence early 1950s. For instance, the 1951 Accelerated Development Plan (ADP) brought an unprecedented increase in enrollment in public Primary schools, emergency teacher training through short professional courses, and the appointment of a large number of "pupil teachers" to teach at the Primary school level (Government of Ghana: Ministry of Education, 2013). Again, the Education Act of 1961 was passed to make Primary and Middle school (now JHS) free and compulsory for all children of school age (Government of Ghana: Ministry of Education, 2013). Though laudable, these two extant policies did not cater for a large proportion of children who were out-of-school – children with disabilities and there was no specific reference to and emphasis on early childhood pre-primary education and educational inclusion.

Ghana's Post-independence Legislations on Inclusive Education

Though Articles 25 and 38 of the 1992 Constitution of Ghana re-echoed Ghana Government's seriousness in promoting the agenda of free, compulsory, and universal Basic education, there had so far, been less emphasis on 'inclusive education'. Again, though the Persons with Disability Law (Act 715, 2006), guarantees persons with disabilities equal access to education and public places, yet, the Act was silent on inclusive education (Republic of Ghana, 2006).

Pre-primary Education officially recognized as part of Basic Education

It was in 2007 that pre-primary education was officially recognized by the Ghana Government as an integral component of Basic education – thus all school-age children in Ghana are now entitled to 11 years of Basic education comprising: Two years of Kindergarten (Kg.), Six years Primary, and Three years JHS (Government of Ghana: Ministry of Education, 2013; Hayford, 2013; Kabay, et. al., 2017).

Ghana's Inclusive Education Policy

The global trend now is that special education is moving away from the institutionalization of children with disabilities in special schools towards inclusive approaches that enable children to have access to mainstream educational programs in their communities (Ainscow & Sandill, 2010; Hutchinson & Martin, 2012; Mantey, 2017) and Ghana cannot be behind. Through various stakeholder engagement and consultations including civil society; political organizations; administrative; traditional leaders; parents; the Ministry of Education; the Ghana Education Service; the Ministry of Health; the National Council for Persons with Disability; the Ministry of Gender, Children and Social Protection; and Disability Organizations, the Ghana government developed its inclusive education policy in 2015. The policy was based on the principle that: No child should be excluded from, or discriminated against within education on the grounds of race, color, sex, language, age, class or social group, religion, political or other opinions, national ethnic origin, poverty, disability, birth, or any other status; that the education system adapts to the learner, rather than expecting the learner to adapt to the system; and that the curriculum, teaching methods, assessment, school culture, and environments, present opportunities for promoting inclusion (Government of Ghana: Ministry of Education, 2013).

Special Educational Institutions to serve as Resource Centers

In the policy, special educational institutions are to serve as resource centers to assist the mainstream system and special units for those with severe and profound disabilities. The Ministry of Education and the Ghana Education Service (MoE/GES) are to promote an inter-sectorial approach to facilitate linkages between educational institutions and social protection (Capitation grant and School feeding), health, community-based rehabilitation, as well as data collection. In addition, the GES is to develop monitoring and evaluation systems to track the progress of IE within the context of wider data collection on communities and citizens. To achieve this, the MoE in collaboration with the GES is to ensure that relevant equipment and assistive devices are made readily available to school children where needed, to enable them to access quality education.

The Current Curriculum

The current early years curriculum is designed generally for teaching hearing and sighted children. No adapted parallel curriculum has been specifically developed for deaf children: both deaf and hearing children use the same curriculum (Al-Zboon, 2019; Liu, et al., 2019). The general education curriculum requires that students do two years of preschool education, six years of primary education, and three years of junior high education (two years of preschool and nine years of basic education). In the schools for the deaf however, deaf children do two years of preschool education, six years of primary education, and four years of junior high education (two years of preschool and 10 years of basic education) (Fobi, 2021). The Ghana National Association of the Deaf supported by the Ghanaian Ministry of Education is currently working with the relevant stakeholders to adapt the general education curriculum for deaf children in

Ghana. Another important deficiency in the execution of the curriculum is that over 90% of the teachers who teach in inclusive settings are regular professional teachers from the Colleges of Education who have been trained specifically to teach hearing children (Fobi, 2021).

These regular teachers often face such challenges as: Communication barriers (Al-Zboon, 2019); failure to identify and adopt appropriate teaching methods required for teaching deaf children; and lack of skills on the part of the teachers to include the deaf children in the classroom social and academic activities (McLinden, et. al., 2018; Singal, et. al., 2015). This problem could be resolved when teachers trained in deaf education are recruited to teach in schools for the deaf.

Language of Instruction and Socialization in Schools for the Deaf

Part of the inclusivity agenda for deaf children is to provide education in an accessible language. However, in schools for the deafⁱⁱⁱ, all the children are exposed to the Ghanaian Sign Language (GhSL) only. Spoken language is not taught (Oppong & Fobi, 2019). Therefore, if a child is enrolled in a special school for the deaf, whether profoundly deaf or partially deaf/hard-of-hearing, that child is compelled to develop skills in the use of GhSL for instruction and socialization because the language provision is not sufficiently nuanced to cater for the different languaging needs and preferences of the school population (Swanwick, 2017). Ghana has 16 administrative regions. Most of these regions have hearing assessment centers in their regional hospitals. However, the Ashanti, Central, Eastern, and Greater Accra Regions have additional district public and private hearing assessment centers. Most of these assessment centers have qualified audiologists, and the rest have audiology assistants who can help in screening for hearing loss. Where necessary, those who fail the hearing screening are often referred to an

audiologist for further diagnosis and interventions. Few of the assessment centers in regions particularly in the aforementioned four regions have speech and language therapists who support children's language development.

Schools connections with parents through Parent Teacher Association (PTA)

Parental involvement in the early education and care of their children is facilitated through PTA which enables parents/caregivers to meet with teachers to discuss the welfare, education, and development of their children. The PTA meetings are often organized between the teachers and parents of deaf children once a term during weekdays during school hours. This system whereby only teachers and parents meet to discuss their children is not the best. Competent educated deaf adult people should, at least, be involved so that they can always discuss and share experiences of the deaf community on the language and communication options for deaf children (Musengi, 2019).

The discontinuity between policy and inclusive educational practice

Studies indicate that though existing Government legislation and policies promote the principles and implementation of educational inclusion of all children in Ghana, caregivers often encounter significant challenges ensuring access to early years' education for their deaf children (Ametepee & Anastasiou, 2015; Mantey, 2017; Opoku, et al., 2020). There is therefore a need to understand the discontinuity between policy and inclusive educational practice, ascertain ways in which processes are monitored, and identify the support needed to sustain recommended inclusive practices across urban and rural contexts in Ghana.

Legislative context

Even though Articles 25 and 38 of the 1992 Constitution of Ghana re-echoed Ghana Government's seriousness in promoting the agenda of free, compulsory, and universal Basic education, these laws have fallen far short of achieving their objectives due largely to limited resources. Again, though the Persons with Disability Law guarantees persons with disabilities equal access to education and public places, yet, the Law was silent on inclusivity (Republic of Ghana, 2006).

Training of human resources for the implementation of IE

To ensure the sustainability of IE implementation, the MoE in collaboration with GES will continue to train the human resource cadre for the quality delivery of IE throughout Ghana. Strategies to be employed, according to the inclusive education policy (Government of Ghana: Ministry of Education, 2013), will include training courses in IE to enable pre-and in-service teachers to deal with diversity in their classrooms.

Method

This project is led by the UK Principal Investigator (PI) of the University of Leeds, UK and two Ghanaian Co-Investigators (Co-Is) of The University of Education, Winneba. The two Co-Is have deaf education and clinical experience. A Ghanaian Project Officer (PO) who is a professionally qualified GhSL interpreter and experienced in audio and video transcription in the Ghanaian deaf education context, co-ordinates the project. The team also includes three research assistants (RAs) who are all professionally qualified teachers of the deaf and hold master's degrees in Education of the Deaf. We also have three deaf team members who are members of the Ghana National Association of the Deaf (GNAD) who supported in producing training materials and dissemination of project findings.

Participants

Participants were recruited from the Southern, Middle, and Northern sectors of Ghana through approaches to three schools for the deaf and two speech and hearing assessment centers. These two health facilities are equipped to cater for audiological and health services for diverse categories of individuals and both have been actively operating for over 20 years. Participants included 12 educators of the deaf, three deaf educators of the deaf, and nine clinicians. Table 1 indicates the participant overview. Of the 15 educators that took part in the interviews, three were headteachers who were the chief executive officers of the three schools for the deaf. They were in charge of the overall management and supervision of the school (i.e. admission of students, assigning of classes to teachers, and in charge of discipline in the school). All the teachers interviewed were teachers of the deaf from kindergarten to lower primary.

Of the two qualified audiologists, one has a Doctor of Philosophy (PhD) in Audiology and one has a Master of Science in Audiology (MSc). The two audiologists have been practicing at the Centre for Hearing and Speech Services (CHSS) for over 10 years. The three trainee audiologists had completed their master's program in audiology and were doing their attachment with the center. The clinician practitioners had their bachelor's degree training in Community Based Rehabilitation and Disability Studies and have been supporting in screening, fitting of hearing aid, organizing formal classes for preschoolers, and offering counseling services for the parents of deaf children. The prosthetics prepare prosthetic devices for deaf children with additional physical disabilities and all categories of children with physical disabilities. Clinical volunteers supported the clinic with assessment after the completion of their first degree- they acquire clinical practicum in the education of the deaf and audiological assessments. These

participants were included in the study because they work closely with families who have deaf children and could provide relevant information on the study.

Insert Table 1 here

Data gathering and data analysis

The original plan for the project was to bring practitioners together for focus group interviews, and interview managers on a one-on-one basis. This plan was adjusted during the Covid-19 pandemic to take account of national and international travel restrictions, and social distancing requirements. We adopted a semi-structured interview design to collect our data. The semi-structured interview was structured around: Teachers' and clinicians' engagement with parents, the interaction between schools, and the interaction between education and health. To keep the research team and participants safe, all the interviews took place virtually, on a one-on-one basis.

Interview of participants

Interview dates and times were negotiated, and participants were provided with the project information sheet and Consent Form via email or WhatsApp pages as preferred, at least three days before the interview schedule. On the day of the interview, phone calls and text messages were sent to remind participants an hour before the time discussed. During the interview sessions, one RA made the phone conference call and introduced the participants and the other RAs, after which the consent of the participants was taken orally and audio-recorded. Time was allowed for questioning and clarifications from the participants before the main interview. The interviews were conducted in the English language, audio-recorded, and transcribed verbatim by all RAs. Each interview lasted between 30 to 60 minutes.

The deaf teachers were interviewed after the social distancing measures had been lifted. These practitioners were initially reached through text messages and WhatsApp video calls and asked for their interview preference (face-to-face, or online). Two of the deaf teachers opted to be interviewed face-to-face with their individual GhSL interpreters and in full compliance with the national safety precautionary measures and protocols to ensure COVID-19 safety. One of the deaf teachers opted to be interviewed through WhatsApp text messages and the RAs complied with the request.

Data analysis

We used Braun and Clarke's (2019) thematic approach to analyze data. The process involved three stages that were developed over three months. Weekly RA and whole team meetings took place to review interview material and develop consensus around the interpretation of data, identification of main themes, and assignment of categories. To ensure conceptually accurate translations, we checked and cross-checked each transcription (Temple & Young, 2004). This process resulted in an analysis code book that was used by all team members to further analyze, describe and report on the interview data. To keep the anonymity of teachers of the deaf children and hearing-health clinicians' responses, we simply refer to them as 'Educator' and 'Clinician' respectively.

Results

In this section, we present major themes highlighted by educators and clinicians during the interview in addressing the research questions raised in the study. The findings were based on proximal and distal entry points of the mesosystem, exosystem, and macrosystem

(Bronfenbrenner, 2005) and the range of influences on early development, care and support, the precariousness of the context, and the resources available. Participants shared their personal experiences and reflected on existing opportunities for, and challenges to, the effective implementation of the agenda for IE for young deaf children across rural and urban contexts in Ghana.

The connection between educators, clinicians and caregivers in promoting ECCE for deaf preschoolers

Communication and collaboration between teachers and parents

At the exosystem level, conditions exist that serve as a source of resources that promote communication and collaboration between teachers and parents. The teachers reflect on the different opportunities for formal and informal engagement with the parents and articulate their expectations and precariousness. Their responses reveal the different ways in which the wider environment influences the distal processes of support.

Teachers' engagement with parents through PTA

The use of PTA as an external interactive body that links teachers to parents for indirect upkeep, care, and development of the deaf child was a strong theme across the interview data. All 15 teachers refer to the use of PTA meetings to encourage parents to communicate with their children and to specifically teach parents aspects of sign vocabulary that will support the children's learning. These meetings also provide an opportunity for parents to 'mingle' with the deaf children. A teacher said:

We always educate the parent sometime during PTA meetings... we teach them ... basic sign language so that when their kids are on vacation, they can communicate with them (EDUCATOR).

The PTA meetings also provide the teachers an opportunity to engage with the parents about their children's learning more generally and to offer specific advice to the parents, in some cases, a form of counseling.

When the parents of the kids come ... we let the teachers sit them down to tell them everything about their children and also advise them ... like a counseling session (EDUCATOR).

Despite PTAs and counseling services serving as sources of resources in the educational context, precarities also exist that need to be highlighted. For example, when parents do visit their children during weekends the teachers may not be there to talk to. A teacher reported:

I as a teacher don't usually meet the parent because most of the parents do visit the children during the weekend and we are not in school on weekends, so we don't usually meet them (EDUCATOR).

Additionally, parents are not always able to attend PTA meetings, and as a teacher pointed out, the gap between meetings is sometimes too long to maintain a continuity of support, and language and communication skills.

Some of them after the PTA learn it and go away so the next time they come they have forgotten (EDUCATOR).

There are also chronic financial constraints on the parents' ability to follow up on school support, especially in the case of single parents, and this seems to be a frequent issue.

And since most of the parents are single parenting, they can't afford the PTA dues because they don't pay tuition fees¹ (EDUCATOR).

Interaction between schools (mesosystem)

On the connections between schools, a teacher indicated that connections with mainstream schools and other schools for the deaf, such as for sporting events, drama activities, and festivals, are supportive of children's social and communicative development with other deaf and hearing children, and in terms of inclusion in the wider communities.

Sometimes we go there for an excursion to interact with the deaf children. Sometimes we organize games and they also come to our school sometime for return matches... (EDUCATOR).

Another teacher pointed out that there are many opportunities for a positive inclusive experience to enable a wider acceptance and understanding of deafness and reduce societal stigma.

(...) our school is also part of the schools there so whatever they do, we are always part of it, ... yes so kindergarten (Kg) department we have Kg week, during this week, all the Kg schools ... here we all meet (EDUCATOR).

Finally, a teacher reiterated that the collaborations between the special schools through WhatsApp, text messages, and phone calls also enable teachers to share resources and approaches. These media were used since the schools and the centers were connected and have common WhatsApp and Facebook platforms where they can share information:

Sometimes through WhatsApp and other things, when we see their program on the platform ... we call them and discuss with them what they are doing ..., when they show it to you ... they will teach you how to do it. Then you also use them to teach your people. ... (EDUCATOR).

Clinicians

The clinicians talked about showing the parents that their deaf child can succeed in the world.

However, when they gather the courage and bring their children we can show them some students who have climbed the academic ladder ... When they ... get to know that some deaf can also attend school even to the university level they are delighted ...

(CLINICIAN).

Importantly the clinicians recognize and encourage the value of parent-parent support.

Other parents have gone through the process. So sometimes when we need them to come to talk to some parents they do so (CLINICIAN).

The clinicians talk extensively about counseling and the emotional support that they offer to parents. Their comments underline the emphasis that they give to ‘acceptance’ and ‘hope’, and the importance of having normal expectations for their child. Whilst providing technical support they offer social and emotional connections and advice about how to adjust and continue to be a part of society.

We tell them they can attain any goal that they want to achieve whatever they want to be ... So we always advise the parent ... This is the time the child needs them most ...

(CLINICIAN).

Finally, the clinicians comment on the need for more engagement and support from parents and an understanding of the precarious lives of the children. They see themselves as a vital link in the support system.

Support from parents is difficult, you have few parents who understand and are ready to go all out to support their kids but for some ... the children would have been dumped elsewhere ... (CLINICIAN).

Interaction between education and health (exosystem)

One of the Heads indicated that the primary connection between education and health rests on the early assessment and identification of hearing loss that then opens access to special schools:

You must go there to prove the child needs special education, even if you go to other hospitals, ... still, you have to go to the assessment center ... for educational assessment that will give us the impression to give you admission (EDUCATOR).

Interaction with the wider community (mesosystem)

Interactions with the community such as visits to the market and police station develop children's understanding of the world and also awareness-raising in terms of understanding of deafness. A deaf teacher remarked:

Sometimes we go on educational trips ... to places like the police (...) Also they do visit the market with their parents and gain experience in the act of buying and selling (EDUCATOR).

NGOs not only provide support in terms of donation of resources, such as play equipment for the children but also contribute to wider societal understandings of the educational requirements and conditions. A head teacher noted:

(...) the school usually has these benevolent corporate organizations and NGOs. So this school has... sponsors of the school ... there are facilities put up by organizations and churches (EDUCATOR).

Resources and precarities of sustaining inclusive ECCE

Education - mesosystem - precarity

At the mesosystem level, conditions exist that serve as precarity and therefore pose some challenges to the connections between schools and parents. Most schools for the deaf in Ghana are spread apart and this makes it a challenge for these schools to have common activities, looking at the distance and locations. Deaf children are often discriminated against due to the communication challenge that some hearing children have in interacting with them. There is also some discrimination at shared events, as a teacher noted:

Sometimes when we go out with the children, the regular schools make us know that we are not equal to them. So we find it difficult to mingle with them because most of the hearing children are not willing to play with the deaf children (EDUCATOR).

Clinicians - macrosystem - resource

The medical input is joined and so holistic, especially in the instance of the coexistence of more than one disability such as autism. One of the Audiologists said:

Of course, if they need referrals we do refers ... some of these children are autistic (CLINICIAN).

There is significant input into the medical context from donations from benefactors (including hearing technologies companies) and especially Non-Governmental Organisation (NGOs) such as Rotary who donated a minivan to one Centre for outreach testing of rural communities, also global organizations such as World Vision, as noted by an audiological assistant:

The equipment about 90% if not more is all donated by some individuals and some groups to the Centre (CLINICIAN).

The schools rely on these types of support for books and other teaching equipment, school sanitation, and in one case a water supply, carpentry workshop, and children's playground. A head teacher said:

We have serious challenges with water... for instance, a carpentry shop was given to us by an NGO. This one was given to us by ... And then World Vision is also helping us with a mechanic-like bore-hole that supplies us with water. We also have some NGOs who are into building ... and ... recently ... built a playing ground for us (EDUCATOR).

One of the schools/services is run by the Salvation Army as a mission institution that therefore falls within the remit of the Christian Health Association of Ghana, which is under the Ministry of Health. This means that in terms of recruitment, the government provides some of the staffing. Other staff are paid by the facility.

Education – macrosystem – precarity

One chronic problem that is a worry to most of the schools is the constant supply of good drinking water, as noted by a teacher:

Yes, we don't have a regular flow of water in the school (EDUCATOR).

Diversity of local languages in Ghana (macrosystem)

Some of the respondents expressed concern about the children having already developed some form of home language in the form of gestures before being enrolled in the school, which poses a big challenge to the teachers. A head teacher reported:

Before they became students here, their parents were using the local language in terms of gestures ... I will say “affects them” ... (EDUCATOR).

The differences in sign language in different communities and schools may present a challenge to the children to communicate with other deaf people, as a head teacher reported:

Because the children are deaf, we use ... Ghanaian sign language, which is the official language of the school but is not recognized by the government ... some sign language differs from community to community ... there is a slight difference in our sign language (EDUCATOR). (This was confirmed by participants at an 'Impact Workshop for Stakeholders' on July 29, 2021, at Windy Bay Guest House, Winneba).

The language used to label the children could influence them to either socialize or isolate themselves. The participants believe that deaf children are stronger than hearing children and as such do not want to associate with deaf children. A hearing teacher said:

Oooh, some people are saying that there is no hole in the deaf bones so the deaf is stronger than them (EDUCATOR).

The educational system does not allow for accommodations: Implementing the policy of not repeating any student could affect some children with low academic performance, as a teacher noted:

According to GES, they said no child should be repeated so we let them go (EDUCATOR).

Clinicians - macrosystem - precarity

Some audiologists noted that technology is expensive for families and it's difficult to rely wholly on charitable donations:

Unfortunately hearing aids are quite expensive ... we don't provide them with free hearing aids. However, we are in collaboration with other hearing aid NGOs ... and from time to time they provide some hearing aids and we dispense it to the deaf. However, for those who can afford it, we always direct them to other places where they can get programmable hearing aids ... (CLINICIAN).

But when donated and the equipment is broken, it is problematic – donations are not a panacea, as an audiological assistant stated:

(...) when it breakdown it has to be sent back to the person who donated it ... and it is the same person who fixed it and send it back at his own cost ... (CLINICIAN).

Work and charitable interventions are often stalled by local, national, and international conditions. An audiological assistant noted:

I know of some Non- governmental organization that comes here every year but is been a while since they came because of the corona ... (CLINICIAN).

Discussion: Applying the mesosystem, exosystem, and macrosystem approaches to the development of IE

Responses to the interview questions revealed the interaction, interplay, and processes between deaf educators and hearing-health practitioners and caregiver connections and how the wider context of policy and practice can inform the progressive development of IE in urban and rural contexts in Ghana.

Extant Policies and Laws

Within the macrosystem theory, there exist extant policies which need to be revisited. For instance, the 1951 ADP, the 1961 Education for ALL policy, the 1992 constitution of Ghana, and the Persons with Disability Law – all never made mention of deaf people. What runs throughout the Law is ‘a person with disability’ without concentrating on specifics such as deaf people or blind people. The confusion explains why regular and special education teachers are unable to offer categorical special needs education to deaf people (Bernadatte, 2019; Knoors, Brons, and Marschark, 2019; Mandke and Chandekar, 2019).

Communication and collaboration between teachers and parents (exosystem)

One major means through which teachers connect with parents is PTA meetings where parents acquaint themselves with the school environment, interact and mingle with other parents and deaf children, and learn how deaf children communicate and interact among themselves (Honu-Mensah et al., 2022; Opoku et al., 2018). This exosystem level whereby only parents/caregivers and teachers meet to discuss the welfare, education, and development of the children could be improved upon to include other ‘significant others’.

Language delay

Teachers of deaf children reported that the majority of parents developed a form of gestures with their children before they are enrolled in the school and according to the educators, that affected the children’s language acquisition and development in school. Thus, deaf children entering Kg., show limited vocabulary and narrative skills in both signed and spoken languages (Hettiarachchi, et. al. 2019).

PTA meetings (exosystem)

Again, PTA meetings are held termly, (three times a year), and parents are not always able to attend due to financial constraints, and the gap between meetings is often too long to maintain a continuity of support in language and communication skills. Furthermore, the location and spread of schools deter the majority of parents from attending PTA meetings regularly.

Interaction between schools (exosystem)

At the exosystem, schools serve as immediate environmental settings that impact the developing child (McLinden, et. al., 2018), and therefore interactions between schools was an aspect of caregiver connections that could promote or hinder the inclusion of deaf children in educational institutions. Insights from the interviews evidenced that the majority of respondents agreed that connections with mainstream schools and other schools for deaf children are supportive of children's social and communicative development with other deaf and hearing children, and in terms of inclusion in the wider communities (Ametepee & Anastasiou, 2015; Kabay, et. al., 2017).

Discrimination against the deaf children

Many opportunities also exist that promote inclusion, such as the celebration of KG week, sporting activities, and excursions, where schools congregate together in one school for a positive inclusive experience to enable a wider acceptance and understanding of deafness and reduce societal stigma. However, the majority of the teachers expressed concern about the incessant 'open' discrimination against their children by regular school children.

Interaction between education and health (exosystem)

The primary connection between education and health hinges on the early assessment and identification of hearing loss that then opens access to special schools. Importantly, this start of the process must be initiated by the parents.

Conclusion

The present study explored policies and practices of inclusive education for young deaf children in Ghana. Our data collection and analysis included interviews to gather critical reviews of current policies and practices. Twenty-four subjects made up of 15 educators of deaf learners and nine hearing health clinicians participated in the study. We employed a bioecological model of educational inclusion of pre-primary children to specifically illustrate the proximal and distal environmental factors of the mesosystem, exosystem, and macrosystem that influence early IE of young deaf children and their caregivers in a low-middle-income country (LMIC).

Addressing the gap between policy and practice

Findings from the study revealed that there is a gap between the policy and the practice of IE in Ghana. For instance, special education teachers and regular teachers have less skills in offering categorical special needs education to deaf learners (Bernadatte, 2019; Knoors, Brons, & Marschark, 2019; Mandke & Chandekar, 2019). To streamline IE for deaf individuals in Ghana, there needs to be a clear-cut policy on teacher training to include: Pedagogies in deaf education, assessment, audiological rehabilitation, and language and communication for deaf people. An important deficiency in the execution of the curriculum is that over 90% of the teachers who teach in inclusive settings are not professional specialist teachers of deaf children (Bernadatte, 2019; Knoors, Brons, & Marschark, 2019; Mandke & Chandekar, 2019). It is therefore recommended that the Ghana government should expedite action on the production of a

‘well-informed and trained human resource cadre for the quality delivery of IE throughout Ghana’ (Government of Ghana: Ministry of Education, 2013).

Use of Sign Language for instruction and socialization

In schools for the deaf, children are compelled to use only GhSL for instruction and socialization. This practice needs to be reconsidered to include a policy on the teaching of speech in the curriculum so that those children who have the potential and interest in spoken language can opt for it.

Above all, GhSL per se, is not fully recognized by the laws and policies of Ghana at the time of writing this report. We suggest this lack of recognition of GhSL should be reconsidered so that the language could be officially recognized and taught as one of the language subjects in schools.

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Table 1. Participant over view

Professional roles	n = 24
Educators of the deaf	n = 15 (3 deaf, 9 hearing, 3 hearing heads)
Deaf teachers of deaf children	3
Hearing teachers of deaf children	9
Head teachers (Head)	3
Hearing-health clinicians	n = 9 (hearing)
Qualified audiologists	2
Trainee audiologists	3
Clinician practitioners	2
Prosthetics	1
Clinical volunteer	1
Sectors of Ghana (n = 3)	Schools for the deaf (n = 3)
Southern Sector	1
Middle Sector	1
Northern Sector	1
Speech and hearing Centers from Southern sector	n = 2

Key: d = deaf teachers

h = hearing teachers/clinicians

ⁱ In this manuscript, deaf children are used as an inclusive term for children with various levels of different cultural and linguistic experiences, and communication preferences. This includes deaf children with amplification and those with additional disabilities.

ⁱⁱ In this manuscript, deaf pre-schoolers refer to deaf children aged between 1 and 5. These children generally include deaf children who have not begun formal education and those in kindergarten (3-5 years). Due to late identification and intervention for deaf children in Ghana, some deaf children are admitted to kindergarten at age eight or more. Families in homesteads and rural areas often delay sending their wards for screening and early identification since there is no clear infrastructural support for the families in those contexts. Those deaf children identified late and are part of kindergarten education are all considered to be part of deaf pre-schoolers.

ⁱⁱⁱ There are 14 basic schools for the deaf in Ghana (one private and 13 public schools).