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A Qualitative Inquiry into the Factors that Influence Deaf Children's Early Sign Language Acquisition among Deaf Children in Ghana

Abstract

The linguistic and cognitive importance of early language exposure for deaf children is well reported in the literature. However, most of such studies have been conducted in industrialized countries with less of such studies conducted in developing and nonindustrialized

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countries such as Ghana. Therefore, hinged on the social interactionist theory of language development, this study explored the factors that influence early acquisition of sign language among deaf children from a low-resource setting in Ghana. Ten mothers of deaf children from these communities were purposively selected for the study. Data was gathered through observation, focus group discussion, and a face-to-face interview using a semistructured interview guide. The data were subsequently analyzed thematically. Parents' knowledge about their children's deafness, sociocultural beliefs, and the parents' interactions with their deaf children at home were found as core potential factors influencing early acquisition of sign language among deaf children in these low-resourced communities. Based on these findings, appropriate recommendations are made for policy and practice.

Introduction

IT IS ESTIMATED that about 470,737 people, representing about two percent of Ghana's population of 32,633,991, have some degree of hearing loss. This percentage of the population includes about 110,625 people who became deaf later in life because of age or as a result of a disease (Mprah, Opoku, Duorinaah, and Nketsia 2022; Ghana National Association of the Deaf 2022; Owoo 2019). As in many other African nations (Abdelmalek, Ismail, Badi, and Abolefa 2022; Ertzgaard et al. 2020; Frank-Briggs 2012), children are well represented among the deaf people in Ghana. Hygiene and health conditions such as ototoxicity, ear infections, meningitis, measles, syndromic or nonsyndromic causes (Adadey et al. 2019; Adoba et al. 2018; Kusters 2020; Ječmenica, Bajec-Opančina, and Ječmenica 2015; Tingang et al. 2020) often contribute to acquired deafness. Over the years, deaf people from Ghana have developed and used the Ghanaian Sign Language (GhSL) and other sign language varieties, including Adamorobe Sign Language, for communication. However, the acquisition, acceptance, and utilization of sign language as a means of communication among deaf children continue to be inconsistent, perhaps because of societal attitudes toward users of GhSL, which may further threaten the social inclusion of deaf children in Ghana. Through informal observation in a nonindustrialized area in Ghana, the authors of this study learned that some hearing parents of deaf children discourage their children from using signs and thus compel

them to verbalize in favor of oralization. This observation served as a motivation to explore the factors that influence sign language acquisition among deaf children in such communities.

Overview on Language Acquisition and Development in Deaf Children

Languages develop and are transmitted naturally within a community of users. A child is expected to naturally acquire the language of their immediate environment (Chomsky 2002). But language acquisition is based on a complex interaction of biological and social factors. Thus, the social interactionist theory emphasizes that social interaction, including the input of adults, is critical for children's language acquisition (Cooter and Reutzel 2004; Duff 2019; Izar, Nasution, and Ilahi 2020; Vygotsky 1962). Regarding deaf children, Humphries et al. (2012), for instance, note that children will acquire the language of their immediate environment without well-ordered instructional processes as long as they have regular access and meaningful communication with members of the community. However, deaf children do not have access to the spoken language of the community and are often not exposed to an accessible language from birth.

As has been widely reported (e.g., DesGeorges [2016]; Flaherty [2015]; Humphries et al., [2012]; Mitchell and Karchmer [2004]; Van den Bogaerde and Baker [2005]) more than eighty percent of deaf children are born to hearing parents. Therefore, deaf children's communicative abilities and exposure to full language may depend largely on the type (deaf parent or hearing parent) of family a deaf child is born into (Klatter-Folmer et al. 2006). There exist diverse levels of apprehension and expectations among parents regarding the communication needs of their deaf children. While parents' expectations may vary, the type of expectation can be attributed to two types of knowledge. The first type concerns deaf experience (which deaf parents have, whereas hearing parents wouldn't have). The second one concerns sign language use—deaf parents are more likely to know how to sign—although it is important to note that there are also oral deaf parents who do not sign with their oral deaf children. Generally, hearing parents face the challenge of learning a new language

immediately in order to interact with their deaf infants at the same time as learning to be “new” parents to the deaf infant. A hearing parent of a deaf child may have observable difficulties at exposing a deaf child to sign language, and they may feel conflicted and face significant challenges exposing their children to sign language early (Flaherty 2015; Marschark, Lang, and Albertini 2002; Humphries et al. 2019; Klatter-Folmer et al. 2006; Wright, Stojanovik, and Serratrice 2022). This often has long-term consequences. Lack of effective early use of sign language has been identified as a catalyst for poor reading and writing skills among deaf learners (see, for instance, Adigun and Ajayi [2015] for Nigeria; Ngobeni, Maimane, and Rankhumise [2020] for South Africa; as well as Strong and Prinz [1997], for the United States, among many others). In turn, studies have found that minimal use of sign language for social interaction may also endanger the psychosocial well-being of deaf children (Antia and Kreimeyer 2003; Hall 2017, within the context of the United States). Based on the foregoing discussion, there is a need for deaf children to acquire sign language as their first language for meaningful community engagement and for them to have a sense of identity within the social structures of their immediate environment.

Unfortunately, studies show that, around the world, there is little general societal knowledge about deaf people and about the issues that affect the lives of deaf people. For instance, Alsudays et al. (2020) conducted a study among 243 Saudi Arabians and reported poor knowledge about deaf people and the challenges they face. Zabeeri, et al. (2020) and Alsaawi, Alharbi, Althunian, and Alahmad (2021) also reported low public knowledge about deaf people in the Kingdom of Saudi Arabia. In addition, Alshehri et al. (2019) in their study among 2,372 residents of various districts in Jeddah, Saudi Arabia, found a difference between males and females, with the female participants demonstrating better knowledge and awareness about deafness and deaf people. Both Alshehri et al. (2019) and Alsaawi et al. (2021) concluded that the level of knowledge about factors affecting deaf people influenced the acquisition and use of sign language by those deaf people and their hearing counterparts.

Deaf people worldwide are continually faced with pressing challenges arising from negative attitudes toward them and their means

of communication. For instance, Lee and Pott (2018), in their study of ninety-eight university students at a southeastern university in the United States, as well as Adigun (2020a), in his study of 236 deaf adolescents from South West Nigeria, affirm that deaf people have reported prejudice, self-pity, and an inferiority complex among the many factors affecting their mental health and, ultimately, causing communication barriers. In their study, Lee and Pott (2018) noted that deaf people's communication challenges are framed by the emphasis on a hearing deficit, while the use of sign language is often considered awkward in a hearing mainstream context. This seems to be a pervasive issue reported by scholars from different parts of the world. For instance, Hoang et al.'s (2011) study of 130 medical faculty, 211 non-Deaf community training program medical students, and twenty-two students from the Deaf community training program of the University of California San Diego School of Medicine, as well as Fajri, Samala, and Ranuharja's (2020) study of 100 residents of Padang, West Sumatra, Indonesia, revealed remarkably awkward behaviors toward users of sign language. These findings stem from a lack of public awareness of the linguistic and cultural characteristics of deaf people. Similarly, Krausneker (2015) posited that the hearing population in Germany has a predominantly negative mindset toward deaf people and that there is a high level of stigmatization associated with the use of sign language for effective two-way communication between deaf people and the hearing members of their communities.

Furthermore, the cost of equipping deaf people with access to information continues to be a barrier posed by the extended society, the institutions, and family members (Adigun, Mosia, and Olujie 2022). By implication, deaf people are sometimes denied their basic human rights (Adigun and Mngomezulu 2020). Thus, just as hearing children are exposed to the languages in their immediate environment for the enforcement of their rights, deaf children should be exposed to signed language early in life by their parents, family members, sign language interpreters, occupational and rehabilitation therapists, and other allied professionals.

Parents, in particular, hold a pivotal position in the acquisition of sign language and in the potential of their deaf children to use sign language for communication (Hall et al. 2018; Hall, Hall, and

Caselli 2019). This is because parents interact with their children on a regular basis, irrespective of their language abilities. Over the years, researchers such as Marippan and Yasin (2020), Mitchell and Karchmer (2004) and Young (1997), among others, have found that parents' understanding of and attitude toward deafness has implications on the socio-emotional adjustment of their deaf children. For instance, Young (1997) suggested that if hearing parents could have meaningful interactions with deaf adults, they would learn and understand Deaf culture and Deaf identities. In other words, understanding Deaf culture and the communication needs of individuals who are deaf will not only influence the social acceptance of a deaf child, but also enhance the child's early sign language acquisition, social inclusion, and adaptability within the immediate social environment. Based on the foregoing, the social environment plays a significant role in the early acquisition and use of sign language.

Yet, studies from different communities and countries point to parents' lack of knowledge about their deaf children's language needs as being a major hindrance to early sign language acquisition. For instance, Mukari et al. (1999) found that Malaysian parents of deaf children lacked awareness and knowledge of the communication modalities available to their deaf children. Specifically, less than fifty percent of the parents of deaf children in Malaysia could communicate with their children using the Malay sign language (known as Bahasa Malaysia Kod Tangan [BMKT]). Mukari, Tahar, Bari, and Manaf (1999) further alluded that among the parents who could use the BMKT, only about 3.9 percent and 1.8 percent of the mothers and fathers, respectively, considered themselves proficient. Lamentably, this situation does not seem to have improved, as a more recent study by Yasin et al. (2017) further revealed that deaf people in Malaysia still experience limitations in effective two-way communication via BMKT. In turn, lack of awareness and poor proficiency in sign language reflected in communication patterns within the home environment affect deaf children's social interaction within their community (Mukari et al. 1999; Yasin et al. 2017).

Although Mukari et al. (1999) reported that hearing parents communicated with their children using alternative communication strategies such as speech, rudimentary gestures, and visual cues, other

studies from around the world, including those by Baboun (2016) for Puerto Rico, Lillo-Martin and Henner (2021) for the United States, and Yasin et al. (2017) for Malaysia, have all revealed that inconsistent use of sign language at home may further aggravate the difficulties in the language acquisition of deaf children, which will invariably affect their learning process at school in later years.

In sum, limited access to early hearing detection screening programs and the absence of early intervention programs to support families with immediate provision of sign language learning programs may delay hearing parents' ability to understand and interact with their children using a sign language. Correspondingly, hearing parents' potential to use sign language with their deaf children at home varies widely (Marippan and Yasin 2020; Van den Bogaerde and Baker 2005). It appears that only a limited proportion of the hearing parents across the globe has the necessary sign language skills and capacities to establish and sustain communication with their deaf children. Yasin et al. (2017), for instance, in a study among fifty deaf students and ten special education teachers in Malaysia, found that some parents of deaf children strive to learn sign language to sustain meaningful and educational interactions with their children; however, additional sociopsychological factors influence the process. Sociopsychological factors such as work, family engagement, and societal attitudes toward persons with disabilities, among other constraints, may significantly influence these parents' level of commitment and adherence to the use of sign language as a means of communication with their deaf children within their home environment.

Current Study in the Context of Ghana

As in many countries in sub-Saharan Africa, the literature points out that irrespective of age, deaf people in Ghana experience negative societal attitudes that result in late language acquisition and limited access to communication, not only for educational purposes, but also for further use in workplaces and when accessing health care and mental health services (Adigun et al. 2021; Kusters 2012). Earlier studies from Ghana (Kusters 2012; Oppong and Fobi 2019) indicate that alienation and exclusion as forms of negative behavior against deaf people are recurrent phenomena, which lead to either

outright rejection or overprotection of deaf children. Northey (2009), for instance, highlighted the social and interactional challenges faced by deaf people in Ghana, reporting that many deaf people experience frustration due to the lack of an efficient communication system using sign language and to the absence of interaction, support, respect, and involvement and participation in family affairs and decision-making processes. Undoubtedly, these attitudes toward deaf people in Ghana may frustrate their social inclusion agenda as expressed by Byram, Gribkova, and Starkey (2002) and by UNESCO (2014).

According to Byram et al. (2002), positive social interactions remain an effective intercultural mediator between actions and actors within a community. In other words, there is a probability that with a positive and accommodating social environment in which nondeaf members of the community show their commitment and empathy toward deaf people, the acquisition and use of sign language by deaf children may be a less difficult task than it currently is. In the context of Ghana, there is a paucity of research evidence on what may inform the early acquisition of sign language among deaf children. Whereas such studies have been conducted for other communities, such as among the users of American Sign Language (ASL), British Sign Language (BSL) and Japanese Sign Language (JSL) among others, as reported by Mayberry and Squires (2006), from both low- and high-resource communities, there is little or no such research in Ghana. Therefore, this study, which was framed by the social interactionist theory of language development, sought to explore the factors that may influence GhSL acquisition by deaf children. The social interactionist theory of language development (Cooter and Reutzel 2004) explains that language learning is largely influenced by the interaction of various social factors such as neighborhood characteristics, culture and language, social supports and social capital, education, family size and family type, and family and environmental stressors.

Objective of the Study

The objective of the study was to explore the factors that may influence early sign language acquisition by deaf children in a nonindustrialized setting in Ghana.

Method and Materials

The study adopted the descriptive multiple-case-study research design (Baxter and Jack 2008). This design allowed the researchers to access and gather relevant information/data through interviews and observations (Cohen et al. 2011; Creswell 2014; Yin 2014) from multiple study sites involving six nonindustrialized communities across Ghana. The purposive sampling procedure was adopted to recruit the participants for the study: ten mothers whose deaf children were of the ages of four to five years old. At the time of data collection, six of the mothers were self-employed, two were working for government agencies, and the other two were employed by private companies. The participants' ages ranged from thirty-two to fifty-one years at the time of conducting the interviews, and all participants were low-to-middle-class income earners.

The initial data collection process used face-to-face audio-recorded interviews and observations that focused on the hearing parents as the first agents of socialization (Bronfenbrenner 1979) and as the primary caregivers. Interviews with the participants were mostly conducted using the local Ghanaian language of Twi,¹ but the interviewers also provided some explanations in the English language because the mothers are bi-/multilinguals who can converse using both Twi (Akan) and English. We made initial trips to the homes of the sampled parents to build familiarity and to create ease. We began the actual data collection when we were sure that the Hawthorne effect² (Cook 1967) was minimal. We first conducted observations of the mothers' interactions with their deaf children at home. The observations were quickly followed by face-to-face interviews with those mothers who assumed an active and constructive role in their children's development (Atkinson and Silverman 1997). In other words, mothers with passive roles in the rearing of deaf children (that is, mothers who hardly spend all week with their children due to various reasons) were excluded from the study. From the parental point of view, the interest of this study was to understand and ascertain the factors within the home environment that influence the acquisition and use of sign language among deaf children in Ghana.

The following questions guided the semistructured interviews:

1. How would you describe deafness as it relates to your child?
2. Have you previously had interactions with deaf people prior to your child's experience?
3. What knowledge do you have about the communication needs of deaf children?
4. Do deaf children need to acquire language in the early years before they begin school?
5. How would you describe your child's existing social relationships?
6. Do you think that your child is experiencing some challenges because they are deaf? If yes, what can you say about these challenges?

Data Analysis

The reflexive thematic analysis set out by Braun and Clarke (2019) guided the data analysis. We looked at the data rigorously. All the transcriptions were coded with pseudonyms and studied reflexively to identify the most recurrent ideas in the participants' responses. After identifying, analyzing, labelling, and recording the most recurrent concepts, we then collated them into logical themes that were consistent with the participants' responses. An analytical description of the themes was developed from the responses of the participants, some of which are provided here as evidence to support the themes. For clarity of context, short descriptions of the participants' feelings and thoughts are provided in quotes (“ ”) in the results section to aid comprehension of the responses.

Ethical Considerations

Informed consent was sought from all the participants. Confidentiality and anonymity were guaranteed, and the participants were therefore assigned pseudonyms (MG1 to MG10). The informed consent documents were written in English but were explained, in some cases, in a local language that was best understood by the participants. The participants were given the option to opt out of the study at any given time without fear or intimidation. Ethical clearance was sought from the Ethical Review Board of the University of Cape Coast, Ghana.

Results and Discussion

After a careful analysis of the data obtained from the observations, which helped to triangulate the data from the face-to-face audio-recorded interviews with the mothers, three core themes emerged regarding factors that influenced early sign language acquisition in their deaf children. These themes were as follows:

1. Parents' awareness about their children's deafness
2. Sociocultural beliefs
3. Parents' interaction with their deaf children at home

Parents' Awareness about Their Children's Deafness

Language deprivation in children is caused by several factors, and parent's awareness of the issues underlying language deprivation vary. For the participants of this study, the children became deaf due to childhood diseases that occurred before speech development (prelingual deafness). Many of the parents only learned about deafness after their children became deaf.

To illustrate, in terms of participants' awareness about their children's deafness, one of the participants, MG2, asserted the following:

My son was not born deaf. I know this because he was responding to noises, especially when objects fell or someone slammed the door. Unfortunately, some months to his first-year birthday, I noticed a change in his response to sounds after he became sick. He had a high fever with a very high temperature.

Another participant, MG6, said that:

He wasn't deaf when he was born but he got sick. The kind of sickness I can't describe, but the effect was heavy on him. Before the sickness he could sit, talk, and even say simple words like *mama* but the sickness paralysed him and he could not do anything. We had to feed him like a baby again. Then as he was growing, when you called him, he wouldn't respond. He could not hear again. He became deaf.

As with MG2 and MG6, MG3 had a similar experience regarding her daughter's prelingual hearing loss. MG3 expressed unhappiness about the news that her daughter was deaf, saying:

I am not happy when I remember how my first daughter lost her sense of hearing. Within my financial capacities, I tried my best to ensure proper health for her. Unfortunately, she failed to adequately respond to voices as she was supposed to. I was told at the hospital that she had jaundice. Although, when I noticed, I was advised to try some local/traditional ways to ensure that she was cleared of jaundice.

We found it intriguing that all ten children had become deaf before full language acquisition for meaningful social communication.³ We asked if the participants had known any deaf people prior to the onset of deafness in their children, and several of the responses are noted below.

MG9 had this to say:

Yes, I have met deaf people before, but I have had no reason to interact with them. I had also heard and read about the Adamorobe community.⁴ I know they talk with their hands. Although I found it very amazing how the deaf talk with their hands, but I had thought I can never understand their communication processes.

The following is an excerpt from a contribution by MG2 that was translated from Twi (Akan):

I have met with deaf people before I got married and had my son. I had a few times interacted with a woman who was deaf in the village. I could remember that I usually would converse with her through writing. Although she was not always happy when I couldn't converse with her using sign language, but at least I interacted with her to a certain extent.

Unlike MG9 and M2, MG7 claimed that she had never met and/or interacted with a deaf person before. She claimed to have watched a televised program/documentary on persons with disabilities that had also discussed deafness. When MG7 was asked if she had met or interacted with deaf people prior to having a deaf child, she said the following with a smile on her face:

My brother! [MG7 referring to the interviewer] I have never met a deaf person prior to having my 'cross'⁵ [referring to deafness in her son as a *cross*]. I have never thought of having anything to do with anyone called deaf, not to talk of having a child who would be talking using his fingers. Unfortunately, here I am. What can I do?

MG7 added further:

I never believed that Kofi [pseudonym] was deaf. But now I have accepted my fate, but I'm still finding it difficult to admit that he would depend on sign language. I must admit that I'm psychologically disturbed with the occurrence.

The findings indicate that the children in the Ghanaian communities assessed in this study may largely have become deaf by a series of childhood diseases such as measles and jaundice, among others. While this study acknowledges various challenges associated with vaccination programs in Ghana, as indicated by Tchoualeu et al. (2021) and Yawson et al. (2017), this study did not query the efficiencies of various vaccination programs that may have prevented the childhood diseases, which may have led to deafness in the children in the study location. Yet, the finding in our sample agrees with that in Tender et al. (2022), who discuss that among many other viral diseases, measles has been a challenging health condition in African nations, including Ghana. It is a highly infectious viral disease among children below fourteen years of age that usually presents with a rash and can lead to brain inflammation, fever, diarrhea, seizures, cough, pneumonia, flu, blindness, and deafness (Bagcchi 2021; Tender et al. 2022). In a similar vein, a report from the Ghana Health Service (GHS) referred to by Adoba et al. (2018), along with data from the Ghana Health Service (2019), showed that the incidence of neonatal jaundice was on the rise in Ghana. Particularly in low-resource settings, untreated severe neonatal jaundice may result in hearing loss, visual loss, cerebral palsy, brain damage, and, in some cases, death (Mwaniki et al. 2012; Seneadza et al. 2022).

It should be noted that our observation in this study was not peculiar to Ghana. Some studies, such as those by Abdelmalek et al. (2022) among eighty children in Misurata medical center, Lybia; Ertzgaard et al. (2020) among 403 school-going children in the Kili-manjaro region within Tanzania, and another study by Frank-Briggs (2012) among thirty-seven parents of children with history of deafness, have noted the implications of untreated childhood diseases and lackadaisical parental attitudes toward treating them. In many countries in Africa, as observed through a systematic review conducted

by Mulwafu, Kuper, and Ensink (2016), diseases and infections of the middle ear remain one of the major causes of deafness among many African children. The current study's findings are consistent with the studies mentioned above.

As reported by the participants, their children had become deaf at a very early age, below three to four years. This largely implied that prelingual deafness was predominant in the locations of the study. As shown in this study, the majority (eight out of ten) of the participants did not have much information about deafness prior to their personal experience with their deaf children. These participants thus tended to have limited knowledge about deafness, its causes, and issues affecting deaf people. In a way, this finding seemed unusual because literature had established the presence of a small village called Adamorobe in Ghana with an unusually high incidence of deafness caused largely by hereditary/genetic factors (Kusters 2020; Nyst 2007). The reference made by participant MG9 to this village and the high incidence of deafness there also implied that this knowledge was in the domain of the general public. However, societal attitudes toward disabilities in general may have informed our finding regarding the inadequacy of knowledge about language deprivation and the communication needs of deaf children. In turn, such vague knowledge about deafness and deaf people could influence the attitudes of hearing people toward deaf people in general.

The responses in this study are consistent with those in similar studies from Saudi Arabia by Alqudah et al. (2021); Alsudays, Alqudah, Al-Bashaireh, Alharbi, and Alqudah (2020); Alshehri et al. (2019) and Zabeeri et al. (2020), for instance, revealing that people have limited knowledge of deafness and the issues affecting deaf people. The current study also indicated that all participants had limited measurable knowledge about deaf issues and deaf people.

Sociocultural Beliefs

At the time of this study, people's perception of deafness and deaf people was still enveloped in religious/traditional belief systems (as inferred from the responses of the study participants). It was unexpected in this age and time that people could still perceive deafness, especially deafness among children, as an "attack from the enemy"

or “punishment from the gods” on a particular family. In our probe, we found that awareness of deafness and attitudes toward the children were influenced by the parents’ sociocultural beliefs. We discovered that the Ghanaian sociocultural belief system heavily influenced the parents’ acceptance of and support for their children’s acquisition and use of sign language. In other words, we noted that these parents’ negative perception regarding societal acceptance of deaf children who use sign language as a means of communication was an impediment to their support for their children’s early acquisition and use of sign language. In support of this assertion, MG10, who had a deaf daughter, said the following:

I believe that what happened to my daughter is beyond the ordinary. I am very sure is an attack of the devil. When the sudden sickness came, I prayed and fasted. I took her to the pastor for prayers and deliverance.

MG10 added further:

We have been talking to her because I have faith in God that she will hear again. Although, she gets better understanding whenever we demonstrate to her. I believe in the supernatural healing of God. I have left everything in the hands of God.

The “God” factor in MG10’s response indicated the engrained practice of some parents to leave matters in God/god’s hands when they encounter difficulties without conceivable causes. Due to their belief in a supernatural being, some of the participants deprived their deaf children of the opportunity of early sign language exposure.

The following response given by MG3 regarding the use of sign language was similar to that of MG10:

I am very reluctant to make her [referring to her deaf daughter] use sign language. We have been trying some local remedies [herbal intervention by a traditional healer] for the deafness. I hope and believe it will work.

When asked if her daughter was communicating through sign language, MG3 replied:

No, I was told that once she started using sign language now, she may not be able to use her speech if the local remedies eventually work on her.

Another participant, MG2, stressed that the way that society makes jest of users of sign language and how they are perceived as outcasts had made her restrict the use of sign language by her son. In addition, there was no one who would teach him the GhSL used by other deaf people. In her words, MG2 asserted:

It is a tough decision for me as a parent of a deaf boy to allow him to completely make use of sign language as a means of communication. This is because our community will look down on us. People will make jest of the boy and it will definitely affect him. Although we use our hands to describe things to him at home, we still try to make him read our lips and faces.

The following statement by MG4 was not that different from the one made by MG2. According to MG4, the societal attitude toward the deaf was a major concern that had prevented her from encouraging her son to adopt and use sign language for communication. She stated:

People in my community usually look down on persons with disabilities in general. They make jest of them. They will not treat him [referring to her son] well, especially when it is obvious that he communicates with his hands and demonstration. I get worried when people call my son different names to mock him because of his condition.

Our findings with respect to the second theme of sociocultural beliefs indicate that sociocultural and religious belief systems had a significant influence on the participants' attitude toward deafness and further caused delays in the acquisition and use of sign language among their deaf children. The responses of the participants quoted above further implied that they saw deafness as an invisible disability, which did not readily attract empathy/sympathy from society (Adigun et al. 2022; Reagan 1995). This finding further stressed that, in order to protect their deaf children from possible hostilities from their nondeaf peers within the community, parents tended to "conceal" the hearing status of their children and would thus actively and extensively encourage lipreading rather than the use of sign language as a means of communication. Those data also indicate that, due to sociocultural and religious factors, the parents were skeptical of the benefits of early exposure to the use of sign language. Related to this, past studies

conducted in other communities, such as those by Adigun (2020) and Adigun et al. (2022) in Nigeria, Ladd (2005) from the United Kingdom, as well as Lee and Pott (2018) among ninety-eight university students from a southeastern US university, all echoed the role of sociocultural implications on the psychosocial adjustment and social adaptabilities of deaf people. For instance, Ladd (2005) noted that negative societal attitudes toward deaf people have continued despite public sensitization and awareness programs. Ladd (2005) also raised concerns about such attitudes toward the overall acceptance of sign language and how hearing people see sign language as inferior.

In the Ghanaian community under study, low public acceptance of sign language and lack of early exposure to sign language will further endanger the social acceptability of deaf people. As is the case in other communities around the world, such as those described in Fajri et al. (2020) among participants from West Sumatra, Indonesia; Hoang et al. (2011) among medical and nonmedical participants at the University of California San Diego School of Medicine, and Krausneker (2015) among some German participants, challenges remain with the Ghanaian society's negative view of sign language and the notion that sign language use is an unacceptable form of communication. Fajri et al. (2020) agreed that such an unwholesome and undesirable negative sociocultural attitude, which devalues the use of sign language, stems from inadequate knowledge and understanding of the linguistic and cultural values of deaf people.

Further, Adigun et al. (2022) stated that society at large has hidden behind the pretense of financial cost to deny deaf people their rightful access to essential information through the use of sign language. The data in this study is consistent with that of Adigun et al. (2022)—from Nigeria; as in their study, the parents of the Ghanaian deaf children and the community at large examined in this study had done little to promote and encourage the use of sign language for communication. Unlike other studies (Baboun 2016; Fajri et al. 2020; Hoang et al. 2011; Mitchell and Karchmer 2004; Young 1997; Van den Bogaerde and Baker 2005), our study confirmed that religious belief was one of the factors that negatively influenced parental acceptance of sign language.

Parents' Interaction with Their Deaf Children at Home

The home environment of the deaf child is important to their psychosocial adjustment. While none of the participants were happy with the fact that their child was deaf, we observed during the data collection sessions that an affective relationship existed between the parents, the children, their siblings, and the other family members. In fact, it was evident that when the parents realized that the children were deaf, they (fathers and mothers) usually and readily sought treatment for their children. MG8 stated the following regarding her relationship with her child:

I have a very good relationship with my daughter. Her hearing condition has never and would not be a hindrance to my relationship with her. Her brothers relate with her very well. They play together and understand her feelings and expressions.

Another participant, MG5, had the following to say about her interaction with her deaf son:

I must admit that besides the challenges with communication through mouth and hearing, my husband and I are trying our best with him. He is our only child for now. So, I would say we have good interaction with him. His father only tries to force him to talk.

MG5 added further:

My husband would have preferred him [her son] to go to a school for the deaf, but such a school is far from our community. He [husband of MG5] makes our son look into his face so that the boy will read lips.

In addition, the responses given by MG1 regarding her relationship with her deaf daughter were not different from those of MG5. According to MG1:

After she was diagnosed and we confirmed the hearing loss, none of us [the family] have deserted her. Rather, I would say that her father increased his interaction with her. He wants her to be able to lipread.

MG1 added:

“It is not that we don't want her to use sign language, but we want her to be able to understand speech through watching the lips. So,

we try to make her watch our faces when we talk to her at home. I can confirm that it is stressful for us and the girl.

These statements suggest that affectionate parent-child relationships existed between the participants and their deaf children. Our finding in this regard was similar to reports from past studies involving different communities, such as those reported by Marippan and Yasin (2020) among some parents of deaf students in Kuala Lumpur, Malaysia; by Mukari et al. (1999) among 787 Malaysian parents of deaf children; as well as by Van den Bogaerde and Baker (2005) among three deaf children from the Netherlands. These studies also showed affective relationships between parents and their deaf children. Notably, some of these studies indicated that mothers tended to have better, more positive relationships with their deaf children than the fathers did. In our current study, we also found that the parent-child relationships were very focused on finding a cure to correct (through medical and religious means) the hearing loss and/or to improve the hearing ability of the deaf children. Hall (2017) points out that hearing parents express shock and disbelief when they learn that their children are deaf, and they strive to explore all possible means to restore the hearing of their children. Our finding among the parents in Ghana is consistent with that of Hall (2017), Kusters (2012), Nortey (2009), and Oppong and Fobi (2019).

The parents in the current study were perceived as loving towards their deaf children; however, it seems that they placed little premium on the early acquisition and use of sign language, as they were more focused on searching for a possible “cure” and concerned about the stigma surrounding deafness. As their statements indicate, parents did not seem to be willing and ready to learn sign language as a means of communication with their children either, focusing instead on forcing them to learn to lipread. This finding is consistent with those of Baboun (2016), Klatter-Folmer et al. (2006), Marschark et al. (2002), and Mayberry and Squires (2006), among others, who stated that hearing parents of deaf children were often reluctant to expose their children to the use of sign language. Thus, effective parent-child communication is hampered, as is the children’s communication with anyone else. Adoption of sign language as a means of communication would require the parents’ willingness to learn sign language along

with their children and reject the social stigma attached to deafness and the use of sign language.

Conclusion and Recommendations

Deaf children across Africa have largely suffered delays in the acquisition and use of sign language. Delays in sign language acquisition and its use are reflected not only in deaf children's reading and writing skills but also in their social-emotional adjustment and adaptability. Few studies have examined possible factors underlying delays in the early acquisition of sign language among deaf children in the Ghanaian setting. This study filled this research gap by using a qualitative research design to explore these factors in a low-resource setting in Ghana. In this study, we gathered data and identified the following three factors:

1. Parents' awareness about their children's deafness
2. Sociocultural beliefs.
3. Parents' interaction with their deaf children at home

Based on the findings of this study, it is recommended that both government and nongovernmental agencies intensify public awareness programs that will further educate and inform the public, not only about the various forms of disabilities in general, but also particularly about low-incidence disabilities such as deafness that are not readily visible. Such enlightenment programs should be aired on audiovisual platforms such as television and radio and posters. Also, face-to-face sensitization programs on the acquisition and utilization of sign language, language deprivation, and the challenges faced by deaf children should be conducted in all communities, including rural communities, nonindustrialized settings, and cities. It is crucial that public awareness about the acquisition and utilization of sign language as well as other issues affecting deaf people be fostered with the full support of the community and religious leaders. More importantly, deaf associations and their members should be partnered in such community awareness programs. The *Ghana National Association of the Deaf* (GNAD) must encourage the establishment of community rehabilitation programs for deaf children and ensure that the parents of deaf children are enrolled in sign language training. Education regarding the importance

of sign language for the psychosocial well-being, adequate academic prospect, and inclusion of deaf children in society will make parents more likely to learn and embrace the use of sign language. When parents are involved in sign language training, communication will be improved within the home environment and, by implication, in society at large. There will also be a higher likelihood of more rapid public acceptance of the use of sign language within the community at large. Once this is achieved, it will further translate into the development of more positive attitudes toward deaf people and reduced social stigma.

Limitations and Suggestions for Further Study

This study was not exhaustive. In other words, there were some limitations that we encountered during the course of the study. We adopted the qualitative research design with only a few mothers of deaf children as participants. We therefore advise that the generalization of the findings be done with caution. In this study, information was extracted during face-to-face interviews with the selected mothers. Fathers were not included in the sample; thus bias is suspected in the responses of the mothers because, based on our observation, we noticed that some mothers interviewed in this study felt that fathers were not actively concerned and involved in language development and the use of sign language by their deaf children. As such, future related research should also actively involve fathers of deaf children as participants. Future researchers may examine the impact of religiosity/spirituality on the early exposure of deaf children to sign language and societal attitudes toward deaf people. A longitudinal study of the early acquisition and use of sign language among deaf children in Ghana may reveal more significant information, which may, in turn, lead to development of active intervention programs. We, therefore, encourage a longitudinal research approach in future studies on the subject.

Notes

1. Twi is a dialect of the Akan languages spoken in southern and central Ghana.
2. The Hawthorne effect is the phenomenon of people changing their behavior when they know they are being observed.

3. A large number of deaf people became deaf later in their childhood (Adadey et al. 2019; Kuschke et al., 2020).
4. In Ghana, the Adamorobe community is notable for its unusually high incidence of deafness.
5. A “cross to bear” by having a deaf child who is characterized with language deprivation and limited social and communication pattern.

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