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Hearing parents learning American Sign Language with their deaf children: a mixed-methods survey

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Abstract: Hearing parents with deaf children face difficult decisions about what language(s) to use with their child. Sign languages such as American Sign Language (ASL) are fully accessible to deaf children, yet most hearing parents are not proficient in ASL prior to having a deaf child. Parents are often discouraged from learning ASL based in part on an assumption that it will be too difficult, yet there is little evidence supporting this claim. In this mixed-methods study, we surveyed hearing parents of deaf children ($n = 100$) who had learned ASL to learn more about their experiences. In their survey responses, parents identified a range of resources that supported their ASL learning as well as frequent barriers. Parents identified strongly with belief statements indicating the importance of ASL and affirmed that learning ASL is attainable for hearing parents. We discuss the implications of this study for parents who are considering ASL as a language choice and for the professionals who guide them.

Keywords: American Sign Language; deaf children; hearing parents; mixed-methods survey; second language learning

1 Introduction

Deaf children who are born to hearing families face a language learning environment unlike almost any other. While the vast majority of children acquire their parents' native language(s) through natural exposure at home, deaf children cannot fully access spoken language. Sign languages such as American Sign Language (ASL) are fully accessible to deaf children, yet most hearing parents are

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not proficient in ASL and thus are unable to provide full input through ASL until they have sufficient opportunity to learn it themselves. This unique language learning environment has led to decades of debate about the most effective approach to ensure that deaf children from hearing families acquire at least one language (Hall et al. 2019). In the current paper, we investigate one such approach —hearing parents learning ASL.

Given that second language learning in adulthood is known to be challenging, it is often assumed that the task of learning ASL by hearing parents is too difficult and takes too long. Professionals often assume that ASL is appropriate only for the small subset of deaf children who have deaf parents, and dismiss ASL as an option for deaf children with hearing parents with the rationale that it is unlikely to be effective (Geers et al. 2017; Madell 2016). A separate argument posits that learning sign language will interfere with spoken language development (Geers et al. 2017), which is a goal for many hearing families. Hearing families with deaf children often experience pressure from health care professionals to pursue spoken language as a primary form of communication (Crowe et al. 2014; Decker et al. 2012; DesGeorges 2016; Eleweke and Rodda 2000; Li et al. 2004, Lillo-Martin et al. 2021), with little support for learning ASL.

While it is difficult to obtain reliable statistics on the percent of parents who sign, the Gallaudet Research Institute report from 2013 to 2014 (the most recent year for which data is available) states that only 22.9% of families with deaf children regularly sign at home (Office of Research Support and International Affairs 2014). Yet, there are some indications that this trend may be changing, and ample anecdotal evidence that many parents do attempt to learn ASL, either alone or in conjunction with spoken language. For example, a recent survey found that over half of families with deaf children use multiple communication modalities (National Center for Hearing Assessment and Management 2021). Over the past five years a social media campaign called “#Why I Sign” (<https://www.whysisign.com>) has gathered hundreds of videos of hearing parents signing about their decision to use sign language with their deaf child.

A growing body of literature reveals that deaf children who are exposed to ASL at an early age from hearing parents acquire ASL vocabulary at an age-appropriate rate (Caselli et al 2021), with language learning trajectories that largely parallel those of deaf children with deaf parents. In addition, parents display positive outcomes from being deeply involved with their deaf child and engaging in learning with them (Szarkowski and Brice 2016). Thus ASL is likely a viable language option for hearing parents (Lillo-Martin et al. 2021), but little is known about parents’ experiences taking on the task of learning ASL.

1.1 Hearing parents' motivations, beliefs, and experiences learning ASL

Hearing parents who are learning ASL share some overlapping characteristics with other adults learning a second language, but also differ in that their motivation arises from a need to communicate, and their need to learn is time-sensitive (Chen Pichler and Lillo-Martin 2019; Snoddon 2014). This increased motivation and urgency is reflected in parents' reflections about their experiences. For example, Weaver and Starner (2011) interviewed 11 hearing parents of deaf children (ages ten months to 16 years). When asked about their motivation, their primary response was that they learned ASL to communicate with their deaf child. Additional motivation included a desire to provide an ASL and English bilingual environment for their child, to help their child gain access to the deaf community, and to include their child in family life. Similarly, Chen Pichler (2021) interviewed 23 hearing parents in the US whose deaf children ranged in their use of hearing technology. Parents reported that they were learning ASL to communicate with their deaf child, and because they had a desire for themselves and their child to become ASL-English bilinguals.

A desire to learn ASL is a starting point, but to be successful parents must have ample opportunities and resources available to them. In Weaver and Starner's (2011) study, hearing parents reported that they relied on early intervention services, including sign language classes, as the most helpful resource for learning ASL. Parents who had access to Deaf Mentors found them extremely helpful as well (Hamilton and Clark 2020). Additional resources parents report using include books, DVDs, and websites. Chen Pichler (2021) found that parents benefitted from an ASL teacher or mentor who visited their home, but as this was only provided one to two hours per week, they sought additional support through evening classes and online resources or DVDs.

1.2 Challenges and barriers to parents learning ASL

There is no doubt that hearing parents who endeavor to learn ASL to communicate with their deaf child face a challenging task. Language learning in adulthood is much more difficult than doing so in early childhood (Hakuta et al. 2003; Johnson and Newport 1989), and this is equally true for learning a sign language (Jacobs 1996; Quinto-Pozos 2011). Parents with recently identified deaf infants face several unique challenges, including new parenthood, dealing with an unexpected diagnosis, and navigating multiple and often conflicting sources of information and

advice. These challenges can become significant barriers to parents' ability to learn ASL. In a study of Australian parents' experiences, Flaherty (2015) interviewed 18 hearing parents of deaf children aged 3.5–30 years about their experiences with their deaf child, including decisions about language choice. Reflecting on their past experiences and what they would do differently, all the parents noted that they wished they had learned Auslan (Australian Sign Language) and taught it to their child as early as possible. Despite challenges, hearing parents have strong motivation to learn ASL. As Humphries et al. (2017) acknowledge, "Certainly, learning a second language as an adult is challenging, but no scholarly study has yet to find that sign languages are more difficult... Parents who find themselves with a deaf child are likely to have strong motivation due to an impulse to communicate with their child in effective ways".

Common barriers to learning sign language reported in previous studies include financial burden, e.g. the cost of hiring a teacher to teach the family sign language, and a lack of access, particularly for those in more rural communities (Flaherty 2015). For some families, barriers derive from a general lack of acceptance of sign language. Families may experience prejudice and bias against sign language, particularly from medical professionals (Humphries et al. 2017; Mauldin 2016; Reagan 2011; Snoddon 2020), some of whom claim that sign language hinders deaf children's ability to develop spoken language, despite the lack of evidence for this claim (Davidson et al. 2014; Lillo-Martin et al. 2021). The growing popularity of cochlear implants may lead families to believe that sign language is not necessary and that their deaf child will be able to fully access spoken language through assistive technology. There are also misconceptions that sign language is not a formal or a legitimate language (Reagan 2011).

1.3 Current study

In light of widespread, yet empirically unattested notions that hearing parents cannot and should not learn ASL, our goal in the current study was to identify a large sample of parents who *had* chosen to learn ASL to communicate with their deaf child in order to better understand how they had achieved that goal. We aimed to expand on previous accounts of parents learning ASL (Chen Pichler 2021; Flaherty 2015; Weaver and Starner 2011) by including a larger sample and by collecting both quantitative and qualitative data. We created a mixed-methods survey to probe the following research questions: (1) How and where do parents learn ASL? (2) What resources are most supportive in learning ASL, and what barriers and challenges do parents face? (3) What is the relationship between child age, parent length of time learning ASL, and parent self-ratings of ASL ability? We

predicted that parents would have heterogenous experiences and would report several sources for learning ASL, including classes and Deaf Mentors, but that time, money, and availability of resources would be significant barriers. We further predicted that there would be a positive correlation between the length of time parents had been learning ASL and their self-reported abilities.

2 Methods

2.1 Survey design

The survey was designed using a mixed-methods approach that combines quantitative and qualitative data, which are analyzed in complementary fashion (Greene 2007). There were four main sections to the survey, described below. The full survey can be found in the Appendix.

2.1.1 Demographic data

We collected demographic information about the parents filling out the survey, including their gender, race, and ethnicity, their level of education, their geographic region, as well as their primary language(s). We also collected demographic information about their deaf child, including the child's gender, current age, age of exposure to ASL, presence of additional disabilities, and current language(s) used.

2.1.2 Experiences learning ASL

We asked parents where they had first learned about ASL, what sources they had relied upon to learn ASL, and the length of time they had been learning ASL. We then asked the parents to rank order these sources according to how much they contributed to their ASL knowledge, and to list additional resources they would have appreciated in learning ASL. We asked about the number of hours per week parents spent learning ASL both in their initial learning phase and currently.

2.1.3 Self-assessment of ASL skills

We asked parents to rate their own skill producing and comprehending ASL, by selecting a number on a five-point scale from “novice” to “proficient.” We included ratings for communication with their child as well as with deaf adults.

2.1.4 Belief statements

Finally, we asked parents to rate their level of agreement with a series of statements regarding the importance of ASL for deaf children and the ability of hearing parents to learn ASL. We presented three statements about ASL as a language choice for deaf children, and two statements about hearing parents learning ASL. We also asked two open-ended questions in this section probing parents' own reasons for learning ASL and their linguistic goals for their family.

2.3 Data collection

All study materials and recruitment materials were approved by the Institutional Review Board at Boston University. Our target population was parents of children who were between the ages of three and 21 years old. We chose the lower limit of three years so that parents were past the initial phase of processing their child's diagnosis and so that we could survey parents who had likely been learning ASL for at least one year. We chose the upper limit of 21 years as the age through which children were likely to be living at home at least part of the year. We recruited participants by contacting parent groups and posting on social media sites that were directed towards parents of deaf children. We contacted several organizations serving parents of deaf children, including Hands & Voices, Council De Manos, the National Black Deaf Advocates, and the National ASL Early Childhood Education coalition. The survey was available in both English and Spanish. Participants received a gift card for completing the survey. The survey was initially hosted using Google forms, but was later migrated to Qualtrics for increased security.

2.4 Data analysis

Quantitative data were derived from the demographic items on the survey, and from parents' self-reported ASL abilities. Further, the sources and ranking of those sources as helpful ones in learning ASL were analyzed to determine the primary resources that supported parent ASL learning.

Qualitative data consisted of parents' open-ended responses to questions about their experiences learning ASL, additional resources that would have been helpful in learning ASL, their reasons for learning ASL, and linguistic goals for their family. Responses were analyzed through inductive content analysis (Schreier 2012). Responses for each question were exported and analyzed individually, and then categorized and sub-coded. For example, when parents described their experience

learning ASL, descriptions were coded as challenges, successes, and supports, and sub-coded to group responses. The subcodes were then converted to overarching themes for each question. Selected quotes from the parents were identified to illustrate each theme.

3 Results

3.1 Participant demographics

The survey respondents were 102 hearing parents of deaf children who identified as having learned ASL. Two participants were excluded from analysis because their children were outside of our target age, so the final sample was 100 participants. Parents primarily identified English as their first language ($n = 91$), were mostly mothers ($n = 89$) and mostly identified as White ($n = 86$). Participants were diverse in level of education and geographic region (Table 1).

Table 1: Demographics of survey participants.

	Overall ($N = 100$)
Parent	
Father	11
Mother	89
Race	
African-American/Black	1
Asian	4
Native American or Alaska native	1
White	86
More than one	3
Missing	5
Ethnicity	
Hispanic or Latino	9
Not Hispanic or Latino	86
Missing	5
Parental education	
High School/GED	2
Some college	25
Two-year college degree (Associates)	8
Four-year college degree (BA, BS)	28
Some post-college work	8
Masters degree	23
Professional degree (MD, JD)	2

Table 1: (continued)

	Overall (N = 100)
Doctorate degree	3
Missing	1
Parent's first language	
English	92
Spanish	4
ASL	3
Other	1
Geographic region	
Midwest	20
Northeast	20
Southeast	17
Southwest	14
West	23
Other	5
Missing	1

At the time of survey completion, the deaf children of parent participants ranged in age from three to 21 years old (mean = 9 years). Most children were identified as deaf at birth, and 43% had an additional diagnosis (Table 2).

Table 2: Demographics of children whose parents filled out the survey.

	Overall (N = 100)
Child's gender	
Female	54
Male	46
Child's age (years)	
Mean (SD)	9.22
Median [min, max]	8.00 [3.00, 21.0]
Born deaf/hard of hearing	
No	32
Yes	67
Missing	1
Child has an identified disability	
No	56
Yes	43
Missing	1

3.2 Quantitative responses

3.2.1 Parent experiences learning ASL

3.2.1.1 Length of time learning ASL

There was a large range in the amount of time parents had been learning ASL, and as expected there was a significant positive correlation between the child's age and the length of time parents had been learning ASL ($r = 0.49$, $p < 0.001$). The majority of parents had not interacted with deaf adults nor had they learned about ASL prior to having a deaf child, and thus their length of learning ASL closely matched the age of their child. A small subset of the participants ($n = 10$) had learned some ASL prior to having a deaf child (Figure 1).

The amount of time parents spent learning ASL per week was highest during their initial learning period: about half spent 0–5 h ($n = 55$), some spent 5–10 h ($n = 31$), and a few parents spent more than 10 h ($n = 14$). In contrast, at the time of survey completion, most parents reported spending 0–5 h a week learning ASL ($n = 78$), with fewer parents spending 5–10 h ($n = 12$), or more than 10 h per week ($n = 8$).

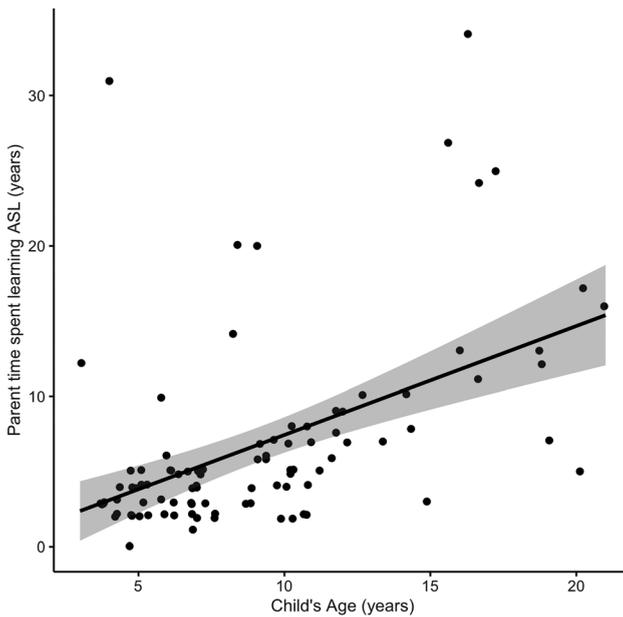


Figure 1: Relationship between children's current age (in years) and the length of time (in years) that parents have been learning ASL.

3.2.1.2 Sources of information about ASL

Many parents ($n = 58$) reported that they first learned about ASL through their own research (via the internet, books, and articles). Only about one-fourth of parents first learned about ASL from their early intervention provider ($n = 22$). Very few ($n = 4$) parents reported that they first learned about ASL from their child's health care professional (e.g. pediatrician or audiologist). Other sources of initial information included previous knowledge about ASL from various sources including college or secondary school, friends, deaf relatives, parent advocacy organizations, and newborn hearing screening associations.

3.2.1.3 Sources for learning ASL

All parents relied on multiple sources for learning ASL. Almost all parents reported doing some amount of self-teaching (e.g. books, videos, computer apps) ($n = 94$). Many parents learned ASL through informal interactions with deaf adults ($n = 74$). Parents took ASL classes in various settings including through their child's educational program ($n = 60$), college or university classes ($n = 40$), and other settings ($n = 40$). Other resources parents used to learn ASL included Deaf Mentor programs ($n = 31$) and private tutors ($n = 29$). Eleven parents reported using resources that were not listed, including ASL immersion programs and family sign programs.

We asked parents to rank each of the resources they had used according to how helpful they were in learning ASL. Parents identified formal ASL classes as the most helpful for learning ASL, both at the college level ($n = 22$) and through their child's school or early intervention program ($n = 20$). For some parents, self-teaching was the most useful resource ($n = 23$). Other resources that were particularly helpful to parents were interactions with deaf adults ($n = 12$), Deaf Mentors ($n = 8$), ASL classes in settings outside of colleges and child's school ($n = 6$), and private tutors ($n = 5$) (Table 3).

Parents had a range of experiences gaining access to ASL instruction. When asked to rate their experience on a scale of one (very difficult) to five (very easy), the average rating was 2.93. About half the participants reported not using an available resource because it was too expensive ($n = 47$), or because they had limited time ($n = 45$).

3.2.2 Parent self-report of ASL skills

Parents were asked to rate their own expressive and receptive ASL skills on a five-point scale, as follows: 1 = Novice, 2 = Beginner, 3 = Intermediate, 4 = Advanced, 5 = Proficient. The majority of parents rated their expressive ASL skills as beginner ($n = 26$) or intermediate ($n = 49$) ($M = 2.91$, $SE = 0.09$), and their receptive ASL skills

Table 3: Parents' reported sources for learning ASL.

Resource	# of parents who used it	# of parents who ranked this resource the most helpful (percent of parents who used the resource)
ASL college class	39	22 (56%)
ASL class through early intervention	59	20 (34%)
ASL class in other setting	41	6 (15%)
Deaf mentor	30	8 (27%)
Private tutor	29	5 (17%)
Informal interactions with deaf adults	73	12 (16%)
Self-taught	94	23 (25%)
Other	11	3 (27%)

as beginner ($n = 26$) or intermediate ($n = 46$) ($M = 2.89$, $SE = 0.1$). Parents also rated their ability to communicate in ASL with their deaf child ($M = 3.39$, $SE = 0.1$). Parents' rating of their ability to communicate with their child was positively correlated with both their expressive self-rating ($r(98) = 0.62$, $p < 0.001$) and receptive self-rating ($r(98) = 0.54$, $p < 0.001$). Parents' rating of their ability to communicate with deaf adults.

Finally, we asked parents to rate their child's overall ASL skills. Parents rated their children's overall ASL abilities as: Novice ($n = 7$), Beginner ($n = 23$), Intermediate ($n = 28$), Advanced ($n = 22$), and Proficient ($n = 21$) ($M = 3.22$, $SE = 0.12$). Parents typically rated their child's ASL skills as higher than their own.

We hypothesized that parents of young children were still likely to be actively learning ASL, while parents of teen and adult children may have achieved higher levels of proficiency. To explore this possibility, we divided our sample according to the child's current age: the younger group included parents of children ages three to eight years, and the older group included parents of children ages eight to 21 years. The distribution was similar across both age groups with regard to parents' ratings of their own abilities, but parents rated older children as having higher ASL proficiency than younger children (Figure 2).

We examined the relationship between the amount of time parents had been learning ASL and their self-ratings. There were significant positive correlations between the amount of time parents had been learning ASL and their self-rating of their receptive skills ($r(98) = 0.45$, $p < 0.001$) and expressive skills ($r(98) = 0.39$, $p < 0.001$). We also investigated whether parents who had been learning for more time would report higher levels of ASL in their children: these ratings were marginally correlated ($r(98) = 0.20$, $p = 0.05$). We speculate that these ratings were confounded by age, and

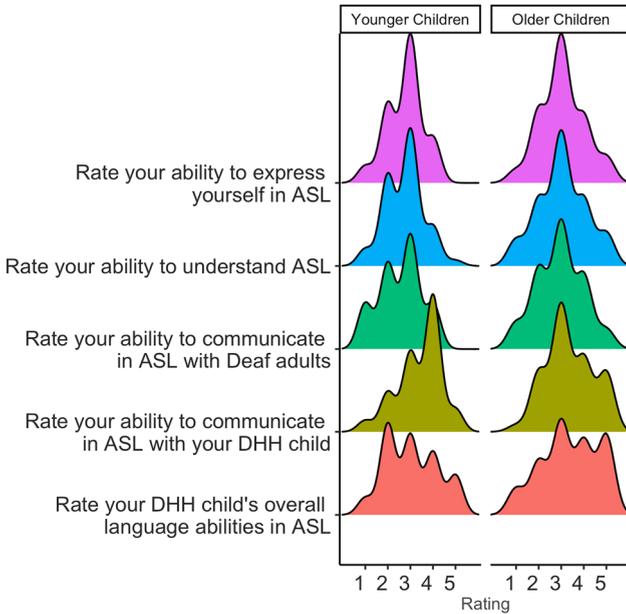


Figure 2: Distribution of parents' self-ratings for parents of younger children (ages 3–8 years) and older children (ages 8–21 years).

that there is collinearity between the child's age, the length of time the parents had been learning ASL, and the child's current ASL skill.

Finally, we asked whether the sources that parents used to learn ASL had an impact on their self-reported ASL abilities. Specifically, we wanted to know whether certain approaches to learning ASL led to higher self-ratings. To examine this, we looked at mean self-reported expressive and receptive ASL skills for the (overlapping) subset of parents that reported learning from each source (Table 4). Overall, no single source emerged as one that led to higher self-rated ASL proficiency. Parents who had taken an ASL class at a college or other setting and those who had informal interactions with deaf adults had ratings that were slightly higher than those who relied on other sources, but the primary finding was that self-ratings did not vary systematically according to the source(s) parents used to learn ASL.

3.2.3 Parent beliefs about learning ASL

The parents in our sample overwhelmingly identified with the belief that ASL is beneficial to their deaf child and to their family as a whole, expressing a strong desire to include ASL as a language for their child and their family. Parents

Table 4: Parent self-ratings of ASL skills as a function of resources parents used to learn ASL.

Resource	# of parents who used it	Mean (SD) expressive (1–5)	Mean (SD) receptive (1–5)	Mean (SD) ability to communicate with DHH child (1–5)
ASL college class	39	3.13 (0.73)	3.23 (0.67)	3.69 (0.95)
ASL class through early intervention	59	2.97 (0.79)	2.92 (0.92)	3.42 (0.88)
ASL class in other setting	41	3.05 (0.89)	2.90 (0.89)	3.54 (1.10)
Deaf mentor	30	3.03 (0.85)	2.97 (0.93)	3.33 (1.09)
Private tutor	29	2.93 (0.84)	2.86 (0.83)	3.17 (0.89)
Informal interactions with deaf adults	73	3.07 (0.77)	3.10 (0.85)	3.52 (0.94)
Self-taught	94	2.92 (0.88)	2.89 (0.97)	3.44 (0.95)
Other	11	3.09 (1.04)	3.55 (1.21)	3.36 (1.21)

responded to six statements about their beliefs about ASL using a Likert scale from one to five with 1 being *strongly disagree* and 5 being *strongly agree*. For statements about the importance and benefits of learning ASL, the vast majority of parents strongly agreed. Beliefs about the process of learning ASL for parents and caregivers were more varied. Almost all parents said they believe that hearing parents can learn sign language to communicate with their deaf child (81.19% *strongly agree*, 9.91% *agree*). Around half of the parents expressed that the process is difficult. Finally, we asked parents about their perceptions of the availability of resources for hearing parents learning ASL. Over half of the parents (56.4%) ranked the statement “there are enough resources for families learning ASL” with a score of 1 or 2 (Figure 3).

3.3 Qualitative responses

3.3.1 Parents’ descriptions of their learning experience

Parents were asked to describe their experiences learning ASL. Response data were divided into two subcodes: success/support and challenges. We describe the overall patterns and then illustrate each one with selected quotes.

3.3.1.1 Success & support

Four approaches emerged as most supportive for hearing parents: (1) obtaining services and support from schools, programs and/or ASL camps; (2) interacting with the Deaf community; (3) taking advanced ASL courses at a local college; and

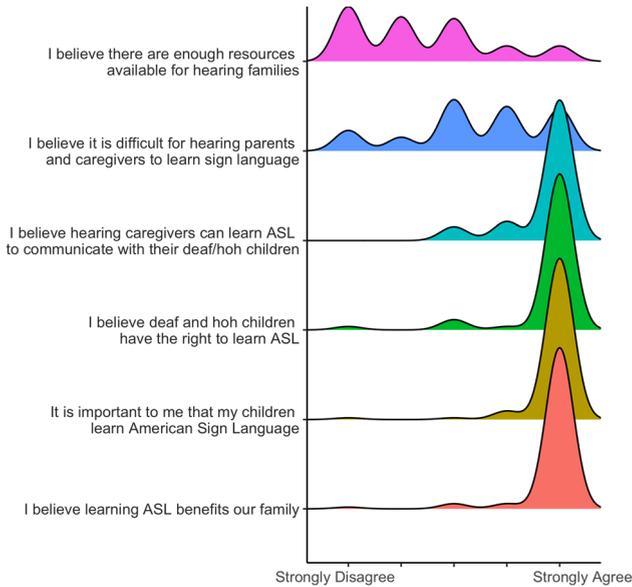


Figure 3: Distribution of parent responses to belief statements.

(4) practicing on their own with sign language apps and videos. These learning opportunities helped many parents reduce frustration and added to their success in learning ASL by providing them with direct instruction as well as positive encouragement and support.

Our experience has been very positive. We learned basic signs from our Early Intervention provider and later got linked in to services with a Deaf Mentor Family Program. The family program has been incredible. All have learned so much and felt so supported. My anxiety over communication barriers has decreased tremendously.

Support services have been incredible, and I credit them for our family's success. It's difficult to learn a new language and entirely new culture in your 30s, but the overall experience has been very rewarding and we're so grateful.

Many families reported that interacting with the Deaf community helped them improve their ASL skills:

We had wonderful support from the Deaf community where our daughter was born, and we were able to attend events with them (like game night at someone's home, where it was ASL only) and learn firsthand.

College-level ASL classes also benefitted several parents:

College classes were full immersion in Deaf culture and ASL which was fantastic, also I was able to transfer my knowledge of French (which I started learning at age 9) grammar.

Several apps, TV shows, and YouTube videos helped parents to practice their ASL. Parents specifically mentioned ASL dictionaries, such as Lifeprint (www.lifeprint.com) and ASL Pro (aslpro.cc), and websites that contain ASL content designed for children, including Signing Time (www.signingtime.com), and ASL Nook (aslnook.com).

Parents expressed their overall positive experiences as follows:

My husband and I enjoy learning languages so we felt having a deaf daughter was a blessing and we've enjoyed learning ASL. We learned a lot really fast initially, but then we had a second child and things stalled out for a couple of years. Now that our second child is three, we are able to focus on learning more ASL again.

My biggest success is being able to communicate freely with my daughter.

When asked what additional resources would have been helpful, parents listed a wide range of ideas, including access to advanced or college-level ASL courses at low or no cost, Deaf Mentors and ASL tutors, support groups, and opportunities to interact with deaf adults. Parents noted that ASL courses would be more accessible if they were offered locally or online.

Free classes, tutor or scholarships for the whole family [name] to be able to learn. We spent a lot of money paying for classes, tutors and baby-sitters.

Having access to Deaf Mentors and private ASL tutors in their homes were also highly desired.

A Deaf mentorship program that doesn't limit by age and goes beyond basics.

Parents also proposed some innovative ideas for obtaining support, such as participating in playgroups, support groups for fathers learning ASL together, online support groups, and interactions with other families with deaf children. Several parents mentioned that they would benefit from forming connections with the Deaf community.

3.3.1.2 Challenges

Parents reported a common set of challenges in their attempts to learn ASL, including limited or lack of access to support and resources related to learning ASL for themselves and their hearing children, and limited time and money to take

courses. Parents also discussed the general challenge in learning a new language. Some parents noted that their early intervention programs did not support ASL:

I lived in an area where there was almost no ASL support, so I had to go online to find any resources at all. I was discouraged from using ASL with my oldest because the Birth-To-Three program didn't want to support it.

It was the greatest challenge I've ever faced. That was in the beginning. It wasn't till later that I had to take it upon myself. I wasn't going to get help from the school district or sympathy.

Receiving support to learn ASL beyond early childhood education was also an issue for some of the families.

After Family Education in preschool there is not much support to parents in the elementary through high school years.

Now that my son has "graduated" early intervention I have no idea where to continue my ASL education.

Time and money were also barriers to many parents to learn ASL efficiently.

We have mostly had to rely on ourselves and resources that I could find to learn ASL. We live in a more rural area, and while there are college-level courses nearby, they are expensive, not really what I need (I don't need credit, I need skills), and not usually convenient for a working parent's schedule. It has taken forever to finally be eligible for a deaf mentor, and even now, she is only available once a month by video.

Several parents shared that it was challenging to become fluent in ASL which left them feeling overwhelmed, embarrassed, discouraged or frustrated. Some wrote that they were able to overcome their fears and frustrations eventually and found it rewarding and worthwhile.

It was very challenging in the beginning and I was embarrassed to learn and now five years later I am trying to tell others to start learning and be anything but embarrassed.

Overwhelming, scared I wouldn't be able to communicate with my daughter in a deeper way, had lots of resources available, but was exhausting mostly in brain power alongside emotional tiredness.

Several parents expressed a specific challenge obtaining access to high-quality ASL courses. They reported that either the courses were taught by unqualified instructors or the courses were too basic. Having opportunities to practice and learn ASL with deaf people was difficult for some parents, especially those who live in rural areas or areas without large Deaf communities.

3.3.2 Parents' reasons for learning ASL

Parents' most common reasons for learning ASL could be categorized as follows: (1) to have a relationship with their child by communicating effectively with them; (2) to support their belief that ASL is the most natural and accessible language for their deaf child; (3) to support their deaf child's development and identity; (4) to be part of the Deaf community; and (5) to give all available options to their deaf child. Parents provided powerful testimonies of their goals for their child and family.

I want my child to feel fully included in our family life. I want him to know what is going on, what we are discussing, where we are headed, and who we are as a family. I want him to come home from school and to be able to tell me about his day, and for me to understand. I do not want him to look back on his childhood and feel that we did not love him enough to try and learn something new for him.

I want to communicate with my children in all circumstances (at the pool, in loud places, etc). I want to show my children that even though they have good access to sound/spoken language through hearing aids that our family values ASL and Deaf culture. I see how using ASL helps their language explode (both signed and spoken). It allows us to have two-way communication when they are just babies.

Parents recognized that ASL is the most natural and accessible language for their child and valued the opportunity to provide their deaf child with full access to a language.

My child is Deaf. ASL is fully accessible to him. It's important to us that everyone in our household can sign. Full access – period.

Parents believe ASL supports their deaf child's development and is part of their identity. Parents shared that learning ASL allowed them to be part of the Deaf community and enabled their child to connect with the Deaf community. Several parents felt it was their duty as a parent to learn ASL. One parent wrote it is “the right thing to do” to learn ASL once they learned that their child was deaf. Another parent felt their son deserves ASL, and so it was important for them to learn:

My son deserves to have access to communication in his house and deserves to have a family who can communicate with him. He was adopted at 2 with no language (we were not aware he was deaf at the time he was adopted) so already lived for 2 years without access to communication ... he deserves a family who can communicate with him and because he is our child, I will do everything I can to learn his language.

3.3.3 Parents' linguistic goals

The most common linguistic goals related to family communication were categorized as follows: 1) to use and become proficient in either or both ASL and English; and 2) to increase the ability to communicate with each other in any possible way. Some parents discussed using both languages at the same time or separately.

Right now, we use ASL and English together. We are working towards separating the two languages so we can all learn them as full languages, not just supporting tools. We hope that all members of our household will become fluent in ASL. (HP 71)

Overall, the parents demonstrated values and aspirations to learn ASL so they could connect with their deaf child and communicate with them effectively. Parents recognized that ASL is fully accessible to deaf children therefore they felt it was important to include ASL in their homes. Specific phrases that families mentioned in their response to this question revealed that for many families, ASL and English were both linguistic goals. While no families used the term bimodal-bilingual, 12 families wrote “being bilingual” as the goal, 14 families wrote “ASL and English” as the goal, and 18 families wrote “ASL and spoken English” as the goal. Thus almost half of families ($n = 44$) mentioned both ASL and English as linguistic goals. Further, 29 families wrote “to become fluent in ASL” as a goal. For the remaining families, four families hoped to use mostly spoken language with some sign, six families' goal was to use sign and spoken language simultaneously, 15 families wrote a goal was not specific to ASL or English, but to communicate effectively, and three families reported that their goal was to become fluent in spoken English.

4 Discussion

We conducted a mixed-methods survey to investigate the experiences, reflections, and beliefs of hearing parents who had committed to learn ASL to communicate with their deaf child. One hundred parents completed our survey, with children ranging in age from three to 21 years. As expected, parents who had learned ASL had strong positive beliefs about the value and benefits of ASL for their deaf child and for their families. Parents reported that ASL classes and personalized instruction were helpful resources, and cited barriers including financial constraints and availability of classes, particularly at more advanced levels. Survey responses suggest that learning ASL can be challenging, but that it is attainable, and has many benefits for deaf children and their families.

4.1 Factors that support learning ASL: resources and family goals

The most significant finding from the families surveyed here is that hearing parents *can* learn ASL. Parents typically began learning shortly after finding out they had a deaf child, and used a variety of sources. Crucial to parents' ability to learn ASL was their access to appropriate resources, including ASL courses and interactions with deaf adults—either through a formalized Deaf Mentor program, or through informal interactions (Napier et al. 2007). Resources provided through early intervention were crucial and cited by many parents as their first source of learning ASL. Many parents also sought further instruction to gain more proficiency and supplement their initial learning, turning to college-level classes and to self-identified resources including videos and other online materials. The majority of families in this study chose to learn ASL themselves because they hoped their child would learn ASL and/or become bilingual in ASL and English. These goals—in which ASL is a primary language rather than a short-term approach—likely provided parents with the enduring motivation to pursue ASL (Chen Pichler 2021).

In their self-ratings of their ASL skills, parents generally rated their own abilities as beginner to intermediate, paralleling the findings of Chen Pichler (2021). Parents learning ASL as adults likely do not reach the fluency levels of native signers in a short amount of time. Nonetheless, it is clear from the parents who participated in this study that parents can achieve levels that enable them to communicate with their child and others who are deaf. Parents who had been learning ASL for longer reported higher proficiency than parents who had only recently started learning ASL. While we speculated that parents' ASL skills might vary as a function of their child's age, this was not uniformly the case. It is likely that parents' ability to invest time in learning ASL changes over time, with the most time invested when children are young, and that some parents may have hit a plateau in their learning as their child got older.

4.2 Common barriers to learning ASL

The primary barriers to learning ASL reported on our survey were access, time, and money. Many parents, particularly those in more rural areas, had limited access to ASL classes, Deaf Mentor programs, or early intervention programs that offered ASL. Time was another extremely common barrier across families, in that available ASL courses conflicted with parents' schedules, or they simply did not have enough time to enroll in an ASL course or work with a Deaf Mentor. Finally, financial limitations restricted families from taking classes, particularly those that

were outside of the programs in which they were already participating. These barriers are parallel to those reported in previous studies of hearing families (Flaherty 2015; Weaver and Starner 2011), and highlight the need for accessible, free, or low-cost resources for parents to learn ASL, including online resources that parents can access from their homes (Lillo-Martin et al. 2021).

In addition to structural barriers, parents also reported systemic barriers in the form of attitudes and advice against learning ASL. Parents may find that their linguistic goals are at odds with those of the school and clinical professionals that purport to serve their child—a tension that is similarly faced by parents of hearing children with a home language other than English (Olivos 2004). In some cases parents faced resistance from medical providers, specialists, and even their own early intervention programs (Humphries et al. 2017; Snoddon 2020) and had to take initiative to learn ASL despite this resistance (Crowe et al. 2014; Decker et al. 2012; DesGeorges 2016; Eleweke and Rodda 2000; Li et al. 2004). Families who did receive support found that it waned as their child got older: while early intervention programs provided a range of resources, there were fewer available such resources for children at school-age. It is important that parents maintain or improve their skills as their child gets older so they can engage in rich conversations with their child at age-appropriate levels, yet support for parents of older children appears somewhat sparse.

4.3 Study limitations

Our recruitment specifically solicited “families who have learned ASL to communicate with their deaf/hh child.” Our participants represent a self-selected sample, and it is likely that families who elected to respond to our survey had positive experiences learning ASL. A study sample that included a broader selection of hearing parents, including those whose goal is primarily for their child to learn spoken English, may have yielded a different set of responses. In addition, our sample was largely composed of White mothers, and thus does not necessarily generalize to diverse families, who may face unique experiences and barriers in learning and accessing ASL. It is possible that our recruitment was not successful in identifying a more diverse sample, and it is also possible that there is variation in the extent to which families have access to information about ASL. In future research it will be critical to determine how families from diverse racial and ethnic groups make decisions about their child’s language. Additionally, although we obtained information about the presence of additional disabilities among the children of parents in our sample, it was beyond the scope of our current analysis to explore the effect of disability status on parent responses, but this is a fruitful area for further research.

4.4 Implications for practice

Our survey revealed some clear implications for the current structure of parent education and support for learning ASL. First, health care professionals and early intervention providers must inform parents about ASL as a language choice for their deaf children (Lillo-Martin et al. 2021). Only a small number of parents surveyed learned about ASL from these professionals; the majority learned about ASL through their own research. Doctors, audiologists, and other health care personnel are very often the first professionals that parents encounter upon learning that their child is deaf. These health care professionals are a trusted source of information (Decker et al. 2012; Li et al. 2004; Porter et al. 2018), so it is critical that these professionals share information about ASL with families. Parents who rely on their own internet research may not find sufficient information about ASL, as available information is largely focused on spoken language approaches (Pire 2018). Health care professionals have a professional responsibility to inform parents of all the available options and about the current data on language outcomes in deaf children (Humphries et al. 2012).

Second, our study revealed that parents who learn ASL often seek resources that are outside the scope of their early intervention or other services. ASL classes through early intervention were an extremely valuable source for parents when their children were young, but many parents also reported taking ASL classes at a college or university, and noted that such classes were particularly helpful. While we did not ask parents how often their ASL classes met, we speculate that university classes likely meet more often and for longer blocks of time than classes through early intervention. This suggests that early intervention programs might benefit parents by expanding the scope and intensity of their ASL classes. Other ways to increase access are to provide classes at flexible times, to provide childcare during classes, and to make classes available at low or no cost to parents. Including parents and other stakeholders in the process of designing curricula ensures that classes and other opportunities to engage with the language are aligned with parent needs, as exemplified in the *Auslan for the Family* program (Napier 2001; Napier et al. 2007). Innovations in online ASL classes, such as the *ASL Connect* ASL Connect 2019 program at Gallaudet and the *ASL at Home* program (Geer and Zarchy, <https://aslathome.org/>) may greatly expand access to families by allowing families to learn ASL on their own schedule and without needing to travel to attend in-person classes.

Finally, parents in our study had strong and positive beliefs about the value of ASL for their child and for their family relationships. Parents agreed strongly with statements about the importance of ASL and provided statements that exemplified

how much ASL had benefited their child and family. This suggests that despite the challenges of accessing ASL instruction and the challenge of learning a new language, parents found it well worth the effort. Policies impacting early intervention for deaf children and their families should provide strong support for parents to learn ASL, either on its own or alongside other languages.

The process of deciding what language(s) to use with deaf children can be a complex one for hearing parents (Crowe et al. 2014; Porter et al. 2018). Professionals who work with parents learning ASL would likely benefit from a framework of family language planning (Batamula et al. 2020; Mitchiner and Batamula 2021), which allows parents to become conscious about language acquisition and language development. Advocating for a bilingual approach where families include both ASL and English with their deaf child can be far more supportive than an approach that advises families to make a strict choice between languages (Secora and Smith 2021). Although the situation faced by hearing parents of deaf children is unique, some of the underlying issues in navigating multiple languages parallel those of bilingual and multilingual families, so professionals may draw from family language planning in broader contexts (Crisfield 2021).

Our survey is a first step in identifying the successes and challenges faced by hearing parents learning ASL, and adds to a growing body of evidence about the unique needs faced by this population (Chen Pichler 2021). In future work, it will be useful to measure parents' ASL skills directly, and to determine what level of proficiency parents must achieve in order to ensure that deaf children reach language milestones at age-appropriate levels. What we can conclude from this survey is that hearing parents can learn ASL to communicate with their deaf children, and those that do report positive outcomes for their deaf child and family.

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