Augmentative and Alternative Communication use: family and professionals’ perceptions of facilitators and barriers

ABSTRACT

Purpose: To investigate the facilitators and barriers involved in the use of Augmentative and Alternative Communication (AAC) by people with complex communication needs in social and therapeutic environments under family members/caregivers and speech-language pathologists (SLP) perceptions. Methods: This is a transversal quantitative and qualitative study with 20 family members/caregivers (FCG) and 20 SLP (SLPG). The data was collected by semistructured interviews with specific questionnaires for each group; recorded and transcribed for further analysis. Data was categorized in thematic axes, categories and subcategories, using recurrent and salient criteria. The two most important topics were: barriers and facilitators. Results: Both groups indicate as barriers: high material cost, using other ways to communicate, family member as interpreter, language and cognitive deficits, acceptance of AAC for users and family members, lack of comprehension of AAC and family perceptions of AAC as speech suppress. As facilitators, both groups indicate the use of high technology, versatility and availability of AAC systems, family adherence and engagement, contextualized use of AAC outside of therapeutic contexts and the importance of therapeutic setting and team support. Conclusion: In this way, the main interlocutors in AAC implementation, professionals or family members can be barriers when they make it difficult for users to exercise their autonomy in communication, or facilitators when they encourage and use AAC with users.

RESUMO

Objetivo: Conhecer facilitadores e barreiras no uso da Comunicação Suplementar e Alternativa (CSA) na percepção de familiares/cuidadores e fonoaudiólogos que atuam com pessoas usuárias de CSA nos contextos familiar, social e terapêutico. Método: Estudo transversal quantitativo e qualitativo com 20 fonoaudiólogos (GF) e 20 familiares e/ou cuidadores de usuários de CSA (GFC). Realizou-se a coleta de dados por meio de entrevistas semiestruturadas com questionários específicos para cada grupo, videogravadas e transcritas para análise. Os dados foram categorizados, conforme critérios de relevância e repetição, em dois eixos temáticos principais: barreiras e facilitadores, contendo categorias e subcategorias. Resultados: Ambos os grupos apontaram como barreiras: custo dos materiais, utilização de outras formas de comunicação, familiar como intérprete, dificuldades linguístico-cognitivas e de aceitação de uso da CSA pelos usuários, falta de compreensão/conhecimento da CSA pelos familiares e inibição da fala na percepção dos familiares. Ambos indicaram como facilitadores: utilização de recursos de alta tecnologia, versatilidade/disponibilidade, envolvimento/adesão familiar, uso contextualizado, importância do ambiente terapêutico, equipes e estratégias utilizadas. Conclusão: Os principais interlocutores na implementação da CSA, profissionais ou familiares, podem se constituir como barreiras quando dificultam os usuários de exercer sua autonomia na comunicação ou facilitadores quando incentivam e utilizam a CSA com os usuários.
INTRODUCTION

The Augmentative and Alternative Communication (AAC) is composed of systems that are intended to benefit individuals who do not accomplish their daily communication needs by natural means, favoring the communication and quality of life of such population, as addressed in the World Report on Disability (1). The AAC is an Assistive Technology (AT), comprising strategies, services and devices that aim to promote independence and greater participation of disabled persons, including those with language impairments, in the territories where they act.

The ASHA (American Speech-Language-Hearing Association) (3), when addressing the possibilities of inclusion by the AAC, includes the limitations of individuals with language disorders in taking part of activities, understanding it in a more dynamic and complex way. These experiences include different stakeholders, in addition to AAC users, such as family members and professionals, and situations that promote the use of such systems, devices and strategies.

AAC is valued as a human communication and social interaction tool that allows people to linguistically signify, from a dialogic perspective, also allowing users to assume the role of active enunciators during the social and linguistic interaction (3). The switch of partners in the dialogue is essential for the person to communicate, including AAC users, who are involved in the world of communication through interlocutors who, in turn, assign meanings to the communication forms of users, such as gestures, symbols, alphabetic boards, among others (4).

In this regard, when acting in the AAC it is important to characterize the user as a linguistic and social individual. Thus privileging a language perspective that comprises the social context and interlocutors, valuing the partnership with family members and the multi and cross-disciplinary activity (5). It is important that this approach, in addition to the embody structure and function aspects, also encompasses the participation in the society and personal and environmental factors (1), as discussed in the ICF - International Classification of Functioning, Disability and Health, proposed by the World Health Organization.

Researchers (6) show that there are few publications focusing on the overcome of barriers and facilitation of AAC use, stressing the need of works with this scope. Other authors (3) justify the researchs on this topic stating that the perceptions of users and people living with such users are not static, and the contexts where people develop tend to change.

Therefore, the aim of this study is to know the perceptions experienced by AAC users’ family members and of speech and language pathologists (SLP) in this field, focusing on facilitators and barriers in the use and implementation of AAC, in order to shift in the focus from disabilities to possibilities and potentials of such group of people and in the use of AAC.

METHODS

The research was approved by the Research Ethics Committee (REC) of the Faculdade de Ciências Médicas (FCM), of Universidade Estadual de Campinas (UNICAMP), under No. 678.814/14, under the terms of CONEP Resolution 466/12, and was submitted to the participants to approve and sign the Free, Prior and Informed Consent (FPIC). It is a transversal study of quantitative and qualitative approach. The qualitative aspect aims to investigate the beliefs and/or attitudes about a given topic (9).

The sample includes 40 participants selected per a variety of types (8). The participants were divided into two groups: Speech and Language Pathologists Group (SLPG), composed of 20 professionals, assigned with letter SLP, followed by a number that is SLP1 to SLP20, to ensure the secrecy of their identity. The other group, of family members/caregivers of AAC users (FCG), composed of 20 participants, assigned with letter C, also followed by a number, therefore from C1 to C20.

The inclusion criteria of the SLPG was to be a speech and language pathologist experienced in the work with people with complex communication needs demanding AAC intervention. The SLPs who does not work with AAC implementation in his/her clinical context were excluded.

The inclusion criteria of the FCG covered family members/caregivers of people with language impairments who have been introduced to AAC, of both genders, older than 18 years. The exclusion criteria of this group were: family members who do not participate in the daily routine of the user, and families that didn’t start to use AAC outside of speech and language therapy context.

Data were collected through semi-structured interviews with open questions, specific for each group, elaborated by the researchers and based on other studies (7,9,10).

Both interviews scripts initially have questions about participants’ profile. In the case of the SLPG, aspects of education and professional activity were included, and for the FCG, the profiles of the caregiver and of the person under the caregiver responsibility were asked. The script of questions for the SLPG was composed of eight questions related to systems and devices and populations with which they work, and included reports of professional experience, encompassing facilitators and barriers in the use of the AAC. For the FCG, 11 questions elaborated comprising general aspects of the language and communication of the AAC user, expectations of the caregiver, as well as specific questions about the use of AAC systems and devices, comprising aspects of the relation with the professional who provided them, perceptions about their use, facilitators and barriers. Both questionnaires are included in Appendixes A and B.

Before the actual use of the questionnaire, pilot interviews were carried out with a SLP and a family member to check the clarity and adequacy of the questions to the study objectives.

Interviews were previously scheduled with the participants and carried out in a quiet environment. All interviews were recorded in video, with the due authorization by the participants. Subsequently, the digital recordings were transcribed to further analysis.

The content analysis aims to objectively, systematically and quantitatively describe the contents of communication, allowing inferences and interpretations of latent content. For such purposes, several fluctuating readings of the transcribed interviews were performed, moving between the said and the unsaid (8).
The analyzed contents were read and reread to identify recurrent or salient issues, leading to the development of thematic axes, categories and subcategories according to the research purpose, using recurrent and salient criteria. According to the recurrent criteria, it is investigated what each discourse has in common with others. By the salient criteria, an item was highlighted, even though not necessarily being repeated in the analyzed material as a whole, but for attesting the objectives and hypotheses of the researcher\(^8\). Two thematic axes were defined, namely, barriers and facilitators, and after an exhaustive analysis done by the researchers, and externally validated by two judges, the categories and subcategories\(^8\) were defined (Figure 1).

**RESULTS**

Results are presented per thematic axe, containing quotes of the interviews, and quantitative analysis in absolute and relative frequency of results found per categories and subcategories.

Barriers, first thematic axe, were categorized as material, individual and environmental/social barriers, and quantified according to the relevance and frequency in which they appear in discourses (Table 1).

Among material barriers, the highlight is the cost of devices, regarded as high and little affordable, especially those of high technology. Some professionals (n=4), in addition to the cost of high technology, regarded the cost of the material to manufacture low technology communication boards also as high, depending on where they work, if there is no specific budget intended for such a purpose. There were family members (n=7) exposing the difficulty of transporting the devices, as exemplified in part of the discourse of family member C5:

> First, it was done only on the table, and the table is a huge nuisance, which we could not take everywhere. Then we made this little bag, and this little bag was the salvation, because we put everything inside the little bag and I can carry it (C5).

The results showed the non-acceptance of the use of communication board as an individual barrier. One of the reasons for the non-acceptance by adult users, mentioned by professional SLP15, was the use of figures, and in this case the professional decided to use an alphabetic board.

In the perception of part of the interviewed SLPs (n=12), the linguistic cognitive impairment leads to a lesser use of AAC, due to the difficulties of users to understand and abstract symbols and images. Most of the family members (n=11) also exposed difficulties of users to understand the AAC, and some mothers (n=5) reported that their children took time to start using the aided systems as a way of communication, exemplified in part of the interview of family member C7:

> In the beginning, he wanted to play with the figures at home, he didn’t want to use them as a mean of communication […] now he is accepting […] he thought that at home those were a toy (C7).

Social barriers include the lack of knowledge and disbelief in the functionality of AAC by family members and education or health professionals, including other SLPs, which was mentioned by part of the SLPG participants (n=12). Such factors can result in prejudice against AAC, resulting in its non-use.

The lack of knowledge allows for the creation of myths, for instance, of speech inhibition, questioned by family members and other professionals, as mentioned by part of the SLPG (n=12). In the interview of family member C17, we observe that the SLP explained the objectives of using the structured communication board and deconstructed some myths:

> She [SLP] is starting now, she is putting together a little board with him, then I asked her if he would not go backward, if he would only want to point his name and not to say it, but she explained me that it was just the other way round […] that it will help, it will support his speech (C17).

![Thematic axes and categories](image-url)

**Table 1. Barriers to use of AAC per group**

<table>
<thead>
<tr>
<th>Categories</th>
<th>FCG</th>
<th>SLPG</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Material Barriers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of low technology device</td>
<td>4 (20%)</td>
<td>0</td>
</tr>
<tr>
<td>Cost of high technology device</td>
<td>10 (50%)</td>
<td>2 (10%)</td>
</tr>
<tr>
<td>Difficulties in transporting the devices</td>
<td>4 (20%)</td>
<td>7 (35%)</td>
</tr>
<tr>
<td><strong>Individual Barriers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linguistic cognitive aspects</td>
<td>12 (60%)</td>
<td>11 (55%)</td>
</tr>
<tr>
<td>Acceptance</td>
<td>6 (30%)</td>
<td>5 (25%)</td>
</tr>
<tr>
<td><strong>Social and Environments barriers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other forms of communication</td>
<td>6 (30%)</td>
<td>20 (100%)</td>
</tr>
<tr>
<td>Family member as an interpreter</td>
<td>5 (25%)</td>
<td>10 (45%)</td>
</tr>
<tr>
<td>Lack of knowledge</td>
<td>16 (80%)</td>
<td>8 (40%)</td>
</tr>
<tr>
<td>Myth of speech inhibition</td>
<td>12 (60%)</td>
<td>3 (15%)</td>
</tr>
<tr>
<td>Understanding of the AAC role by family members</td>
<td>3 (15%)</td>
<td>9 (45%)</td>
</tr>
<tr>
<td><strong>Limited time</strong></td>
<td>6 (30%)</td>
<td>7 (35%)</td>
</tr>
</tbody>
</table>
Part of the FCG (n=9) reported difficulties to include different communication modes in their daily lives for not understanding well how to use them, exemplified by family member C12:

Look, in the beginning, and now I have understood the board, but in the beginning when it was introduced to me she was younger, and I didn’t understand. I could not understand [...] I could not see the meaning of it, now I see how much it is important, how much it facilitates (C12).

In the interview of C12, the use of gestures and looks for communication was explained. However, the possibility of communicating with the family member in other ways also can be a barrier to the use of the AAC aided systems, as reported by all the families (n=20). Many times, the family member who stays more with the language impaired person becomes his/her interpreter.

The little time available was also reported as a barrier by some professionals (n=6), impacting the elaboration and preparing of AAC materials. For family members (n=7), the lack of time is mentioned when they talk about the excess of tasks and limited time available for the user.

On the other hand, AAC systems and/or devices have facilitators, quantified as per the frequency in which they were reported by both groups (Table 2).

According to some speech and language pathologists (n=4), AAC devices are regarded as versatile and moldable according to the creativity, using different materials. Some family members (n=3) also mentioned the adaptation of ways to use the available AAC devices. The speech and language pathologist SLP6, with experience in the public sector, exemplifies this versatility:

You can make AAC with anything, if we have a computer, we make it with a computer, if we have a tablet, we make it with a tablet, if we have paper, we make it with paper...

Table 2. Facilitators to use of AAC per group

<table>
<thead>
<tr>
<th>Categories</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FCG</td>
</tr>
<tr>
<td><strong>Materials Facilitators</strong></td>
<td></td>
</tr>
<tr>
<td>Versatility of the system</td>
<td>4 (20%)</td>
</tr>
<tr>
<td>High technology devices</td>
<td>12 (60%)</td>
</tr>
<tr>
<td><strong>Social and Environments</strong></td>
<td></td>
</tr>
<tr>
<td>Family member adherence</td>
<td>18 (90%)</td>
</tr>
<tr>
<td>Contextualized use</td>
<td>15 (75%)</td>
</tr>
<tr>
<td><strong>Therapeutic strategies</strong></td>
<td></td>
</tr>
<tr>
<td>Family involvement</td>
<td>16 (80%)</td>
</tr>
<tr>
<td>Activities in other contexts</td>
<td>2 (10%)</td>
</tr>
<tr>
<td>Ludic or thematic activities</td>
<td>12 (60%)</td>
</tr>
<tr>
<td>Groups of patients and/or family members</td>
<td>7 (35%)</td>
</tr>
<tr>
<td>Multi-professional team</td>
<td>17 (85%)</td>
</tr>
<tr>
<td><strong>Repercussions</strong></td>
<td></td>
</tr>
<tr>
<td>Linguistic cognitive development</td>
<td>16 (80%)</td>
</tr>
<tr>
<td>Independent communication</td>
<td>5 (25%)</td>
</tr>
</tbody>
</table>

Regarding high technology, part of the SLPG (n=12) reports that it is well accepted by users and family members. Some participants of the FCG (n=5) highlight the strengths of the high technology, especially when comparing tablets, which are lighter and smaller, to communication boards, bigger and heavier.

Speech and language pathologists explained environmental and social situations supporting the AAC use, mainly related to the adherence of family members to AAC, revealing the contextualized use of the AAC by family members, teachers, friends, among others, as the result of such participation.

Family members (n=11) commented the contextualized use of AAC outside therapeutic context, using those systems at home, and part of the FCG (n=6) takes the boards with them when going out. Family member C16 shows the contextualized use of AAC by his adult son:

Where we live, he has a chair he got from the city councilor; an electric wheelchair; he goes there and is friends with the whole neighborhood where we live, he goes there, takes the chair e goes out to the neighborhood, where he sells his lottery tickets. He communicates, everyone understands what he says. Things people do not understand, he pulls from the Bliss (C16).

To encourage and promote the use of AAC, professionals apply several implementation strategies, intended to involve users and family members. Activities elaborated by an intervention permeated by language.

In the work with families, the guidance is the first item mentioned by most of the SLPG (n=16). Nearly all the family members (n=18) receive guidance about the AAC use. This joint work was reported by family member C18:

The SLP from last year who worked with her [who introduced it]. My six-year old boy came along and helped, he arrived home and tried to help me using the board, then this also helped a lot (C18).

Among the strategies with families, mentioned by speech and language pathologists, the following are included: inviting the family to take part of the therapeutic work, and building the device together, showing videos of the sessions and home visits. The involvement of the family during the speech and language therapy encourages family members to use AAC at home.

In addition to working in the context of the family, two speech and language pathologists encouraged activities in different social contexts, such as going to the cafeteria, reported by speech and language pathologist SLP5.

The conduction of therapeutic groups of users and or family members was reported by professionals (n=7) and family members (n=2). The groups allow expanding the perspective of family members and encourage them to use AAC, such as illustrated by speech and language pathologist SLP1:
The support group, which exchange experiences [...] they [the mothers] align exchange knowledge and doubts with such exchanges, even exchanging anxieties, doubts, they are establishing the AAC practice at home, but the most important is that they understand it works (SLP1).

The group activity also occurs between professionals by means of multi-professional teams, allowing the proximity between team members and users.

The repercussions of the AAC use are also favorable. SLPs (n=16) and family members (n=16) believe that the use of AAC helps the linguistic cognitive development, both in the expression and in the understanding of the oral language, promoting behavioral changes in children and adolescents, as reported in the interview of speech and language pathologist SLP5:

The more he manages to express himself, the more he is organized in time, space, his language improves a lot, the contact also improves by using this form of communication (SLP5).

Speech and language pathologists (n=6) and family members (n=7) commented about users managing to communicate more comprehensively in other ways, and this reduced the use of aided systems, such as individual communication boards.

Part of the FCG (n=14) and part of the SLPG (n=5) indicated that the use of AAC allows users to have a more independent communication, as expressed by speech and language pathologist SLP7:

I think AAC allows them to have an autonomy many doubt they could have, people judge, look at them and say: 'he won't speak, since he cannot speak with the mouth, he will not be able to communicate in any way whatsoever', and we know it is not like this (SLP7).

DISCUSSION

Systems and/or devices can be considered material barriers, in other cases the same devices can be facilitators, such as in the case of high technology systems and their great acceptance by family members and users, being regarded as facilitators because of their flexibility. However, authors\(^{11}\) explain that, despite the facilities of these devices, they also represent barriers, such as the requirement of specific skills from professionals and users.

The socioeconomic issue was also pointed out and regarded as a barrier by other studies\(^{7,9}\). However, material barriers prevail for the low technology, which can be related to the fact that few users afford access to high technology, differently from other countries\(^{11}\).

Other highlighted facilitators were versatility and creativity in the adaptation of devices, aiming to overcome communication difficulties in the daily use, similar results to those addressed by other researchers\(^{10}\). Such possibilities of device adaptation can be analyzed in contexts of more vulnerable socioeconomic situation.

The preference of users by other forms of communication, reported as a barrier, supports the findings of other researchers\(^{7,12}\). The importance of users understanding the use of a specific AAC system as a way of communicating, in addition to the environment and the interlocutors of the users\(^{12}\), is pointed out.

Within personal barriers, the linguistic cognitive abilities can limit the use of some aided systems, especially in the case of children, and such results were also observed by other authors\(^{12,13}\). Therefore, it is necessary that the professional knows how to select the form of appropriate system and/or device for the cognitive skills of the users, aiming at their communicative purpose.

The impacts of contextual barriers on the adhesion to the AAC use were significant from family members’ perspective. In this regard, the highlights were the lack of knowledge and the belief that AAC inhibits speech, which limits its use. The researchers have shown that AAC is marginalized by professionals who do not know it or do not understand it well\(^{14}\).

Other authors\(^{15}\) point out the importance of professionals and family members’ knowledge about AAC, to overcome attitudinal barriers that can result in reduced users’ possibilities of social inclusion. In view of the lack of knowledge about and prejudice against the AAC, it is necessary to fight these amongst SLPs, health and education professionals\(^{16}\).

Our findings suggest that professional work based on clinical and scientific data, such as the demystification of the speech inhibition belief, as addressed in other researches\(^{9,17}\), contribute to change what is seen with strangeness and lack of knowledge by family members and other professionals.

The lack of understanding in the use of AAC by family members can be explained by the slow process of acceptance and understanding of AAC use by parents, who are overwhelmed by new information\(^{18}\). In view of such results, the need of guidance and professional-family bond is stressed.

Regarding the use of other forms of communication by family members, authors\(^{9}\) explain that parents also count on personal ways, gestures, facial expressions and body manifestations used by their children to establish their interactions. Thus, it is understandable that professionals should broadly utilize the ways through which uses communicate to supplement their expression.

The position of family members as interpreter, seen as a limitation for independent communication of individuals, is explained by the authors\(^{9}\) as the possible bonding relation between both parties, relations that are permeated by intimacy and a significant share of experiences, resulting in an easy understanding of the users by their family members. Likewise, researchers\(^{19}\) remind the importance of parents working as communication partners and interpreting what their children try to say.

In view of different environmental and social factors, several communication partners were mentioned, such as family members, teachers or classmates, considered as facilitators for promoting communication and interaction. Such findings corroborate another study\(^{20}\), which explains the importance of using the AAC as a linguistic resource in a naturalistic environment.
Contextualized use and family adherence complement each other, resuming the role of facilitator individuals and communication partners in the implementation of such systems, as discussed in other researches\(^6,21,22\). Through the family adherence, the contextualized use of the AAC is encouraged, both at home and at school, and in other social and/or leisure activities.

Regarding the family participation, there are strategies used by SLPs to strengthen family participation, the family guidance being the highlight among such strategies. According to Goldoni\(^{23}\), family guidance is a critical factor that contributes to successful intervention in the use of the AAC. Furthermore, the importance of including language and interaction aspects\(^{24}\) is highlighted, as part of the intervention with AAC.

Other strategies comprise the inclusion of family members during the speech and language therapy, like home visits, and showing videos of the speech and language therapy sessions, and were also surveyed by other studies\(^{9,19,24}\) that point out the importance of the professional recognizing and including the family into the intervention.

The use of diversified strategies in the context of the speech and language therapy evidences different possibilities for AAC use, and takes it to daily life activities. This diversified use coincides with the findings of other researchers\(^3\), valuing the interchange of therapeutic practices in formal and informal contexts with different conversation partners, as well as an intervention permeated by linguistic approach\(^{19}\).

One of the highlighted strategies is the group activity. Reports evidence groups as possibilities of interrelations, seen as positive and which coincide with another study\(^{25}\). According to the authors\(^{24,26}\), the exchange of experiences between family members and users help them to initiate and keep AAC use.

The positive repercussions in AAC use are reflected in a better adherence to and use of the AAC, linguistic cognitive development and behavioral changes being noteworthy, as pointed out by some authors\(^{27-29}\), which revealed increased communication competence, interaction, socialization and learning by AAC users.

Moreover, many family members mentioned the increase of independence in using devices and in communication by the implementation of augmentative and alternative communication systems, as reported in other researches\(^{28,29}\).

When the expectations for the AAC use are attained, there are impacts on user and his/her family communication, transforming them into facilitators for the use of such systems and/or devices. Therefore, it is important to encourage the use of the AAC with other interlocutors, either family members or professionals.

**CONCLUSION**

The results show that the facilitators in the AAC use pointed out by participants are related to the contextualized use of AAC outside the therapeutic context, and to strategies used by professionals, as well as to the positive repercussions of AAC, observed by both groups.

It was easier to family members to express the barriers faced to use the AAC, while professionals better managed to explore the facilitators and expose alternatives to make use of available devices. In this regard, the importance of social and cultural context, and academic experience and continued education of involved professionals are reflected.

The findings highlight that the main interlocutors of AAC users, either professionals or family members, work as facilitators when they use and encourage the use of the AAC, promoting independent communication of users and their linguistic cognitive development, as shown by the positive repercussions. Furthermore, AAC is included in different therapeutic contexts and environments, as well as population profiles, and a well prepared and engaged professional is an important facilitator agent of such practice.

The positive and facilitator aspects of speech and language therapy based on the patient as social and linguistic, and on the interface with several communications partners, aim to promote the speech and language therapy practice, as well as the implementation and use of AAC in different contexts.

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**REFERENCES**


Author contributions
The research is part of the master’s thesis of NR, who elaborated the interviews questionnaire, performed the data collection, categorized the data and prepared the final text. RYSC followed the whole process, conducted research orientation, participated in the elaboration of the interview questionnaire and revised the final text.
Appendix A. Questions guiding the interview with Speech and Language Pathologists

Participant (Identified as SLP1 to SLP20 to ensure the identity secrecy)

Gender:
Graduation (course, place and graduation year):
Enhancement, Specialization, Residency, Master’s and/or Doctoral degree (course, place and completion year):
Position and Place of work:
Professional experience: AAC experience:
Experience with AAC during graduation:

1. Do you use AAC in your professional practice? Talk about the AAC devices you use. For which types of people and ages do you use such devices?
2. How do you choose and adapt the AAC devices?
3. Do you think the use of AAC is functional with your patients?
4. Tell a little about your professional experience, what are the facilitators/favorable aspects and difficulties/ unfavorable aspects in the implementation and use of the AAC in different contexts: family, school and professional (relation with the patient and other professionals).
5. Would you recommend the use of the AAC?
6. What do you think about the relation between speech and AAC?
7. Talk a little about your preparing to work with the AAC. Did you have contact with the AAC during your formation?
8. Would you like to add something else about the favorable or unfavorable aspects of your activity with the AAC?
Appendix B. Questions guiding the interview with family members and/or caregivers

Participant (Identified as C1 to C20 to ensure the identity secrecy)
Age:  Gender:  Years of education:
Educational background:  Profession:
Family relationship:

1. Talk a little about the language of the person you take care of.
2. How does the person you take care of communicate with you, with the family and with friends?
3. How do you and the family communicate with him/her?
4. Talk a little about your expectations regarding the speech and language of the person you take care of.
5. Tell a little about how speech disorders have been worked in the speech and language therapy.
6. Can you tell if any communication devices were proposed for the person you take care of? If yes, talk a little bit about that.
7. Does the person you take care of use some communication device like boards, tablets or others? If yes, tell a little about the difficulties and facilities in using such devices.
8. If not, but if they have received guidance to use alternative communication devices, tell us why they do not use them.
9. Did the family get support and guidance to use AAC devices?
10. Would you recommend the use of these devices to other people in the same conditions? What would you say to a family that has just started to use AAC devices?
11. Would you like to add something else about the favorable and unfavorable aspects in the use of AAC?