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The impact of counselling on caregivers' readiness to use Augmentative and Alternative Communication: A pre-post survey study

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Abstract

The success of AAC implementation for regular communication at home primarily depends on caregivers' perceptions and attitudes towards AAC. However, misconceptions and negative attitudes influence caregivers' attitudes to use AAC with their children. So, appropriate counselling and guidance might help in changing caregivers' perceptions and attitudes towards AAC. Hence, the present study was conducted to check for the change in the perception of caregivers to use AAC post-counselling. A descriptive survey with pre-post comparison method was used. The data was collected from a total of 83 caregivers of children with special needs of two speech and hearing institutes from Karnataka. The study was conducted in three phases. In the first phase, an e-survey was conducted using a checklist. Based on the scoring pattern for each question, the participants were divided into sub-categories and the percentage was calculated. In the second phase, caregivers were given counselling according to the categories. In the third phase, caregivers rechecked for their readiness to use AAC through a feedback form. Percentage of pre-post counselling comparison of readiness to use AAC was calculated. Post-counselling, 100% of participants had high readiness to accept the use of AAC compared to pre-counselling. This change could be due to increase in caregivers' awareness and knowledge about AAC during the counselling sessions as well as while self-administering the checklist. The present study thus indicates the vital role of counselling in reducing negative attitudes and myths towards the use of AAC.

Keywords: AAC, counselling, perceptions about AAC, acceptance and readiness.

1. Introduction

ASHA states that, "Augmentative and Alternative Communication (AAC) includes all forms of communication (other than oral speech) that are used to

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express thoughts, needs, wants, and ideas" (ASHA,1997). It includes mainly two types of AAC system, that is, aided and unaided communication. Aided communication refers to the use of aids external to the communicators body that can be either low tech or high tech (Beukelman & Light, 2020); for example, objects, symbol cards, written letters/ words, or speech-generating device. On the other hand, unaided communication refers to communication that is entirely established without external aids such as natural speech, sign language, or gesturing (Loncke, 2022). The primary aim of AAC intervention is to facilitate a child's communicative competence through the use of multiple communication modalities that are by their very nature supplementing ("augmentative") or replacing ("alternative") natural speech (Light, Beukelman & Reichle, 2003). AAC can be utilized to support a variety of communication difficulties in children who have difficulty expressing their needs (Constransitch, 2021). The research suggests that AAC has benefits on functional communication skills, challenging behaviours, language development (both receptive and expressive skills), and speech production of young children with CCN (Drager, Light & McNaughton, 2010).

AAC users communicate with a variety of communication partners who have different responsibilities in their life (Kent-Walsh & Mcnaughton, 2005). The National Joint Committee for the Communicative Needs of Persons with Severe Disabilities (1992) has noted the importance of identifying communication partners who are most critical to various communication environments. To have successful communication interactions with individuals who use AAC, communication partners must be able to give and receive messages (Kent-Walsh & Mcnaughton, 2005). Significant commitment and support from the entire family unit is critical for the positive integration of AAC (Glacken et al., 2019)

Caregivers' are the primary people engaging and interacting with infants on a consistent basis; consequently, caregivers are seen as a child's first teacher (Safwat & Sheikhany, 2014). Therefore, they must be members of the AAC team, at all levels of assessment and implementation (Beukelman & Mirenda, 2005). It has been highlighted that caregiver involvement in AAC is important (Huer & Lloyd, 1990). Caregivers have a vital role in deciding whether or not to accept AAC system for their child (Moorcroft et al.,2019, 2021; Park, 2020; Park et al.,2020). Hence, it is very essential to enhance and clear Caregivers' perspectives towards AAC (Park, 2021).

Caregivers' awareness and attitude towards AAC have influence of its use at home and in society (Marshall & Goldbart, 2008). However, caregiver's misconception eventually results in abandonment or rejection of AAC. There are many myths in the minds of caregivers' about AAC such as AAC should be considered as the last resort for communication, AAC hinders the development of speech and so on. Several studies claim that caregivers' who accept AAC treatment approaches for their children are more determined to support their child's success with these interventions (Goldbart & Marshall, 2004; McNaughton, 2008; Parette et al., 2000). These caregivers' are reported to actively promote their children's use of AAC in their everyday lives and actively engage in identifying the AAC device selections and establishing the intervention goals (Marshall & Goldbart, 2008). In contrast, caregivers' with a pessimistic outlook and little understanding are more likely to believe in

misconceptions about AAC and frequently favour relying only on conventional therapy methods to enhance their children's speech output (Kim et al., 2021). Through in-depth interviews with mothers of children with disabilities who were not utilizing AAC discovered that there was a lack of information and misconceptions about AAC (Oh, 2018).

The success of AAC implementation for regular communication at home primarily depends on caregivers' perceptions and attitudes towards AAC (Shin & Lee, 2016). Caregivers' being the major communication partners, they are required to have sufficient knowledge and readiness to accept the use of AAC with their children (Marshall & Goldbart, 2008; McNaughton et al., 2008). There might be caregivers' who are not at all aware of AAC, whereas others might know but still not have the readiness to use AAC with their children (Park, 2020; Park, 2021) Because of their limited understanding of AAC, caregivers are more likely to accept myths, which might prevent them from providing their children with the right intervention (Kim et al., 2021). Given the critical role of caregiver in AAC implementation and the influence of their perceptions and knowledge, it is essential to address these aspects through adequate support. Hence, the present study aimed to examine whether counselling can positively influence caregivers' perceptions of (AAC) and increase their readiness to use AAC with their children.

2. Methodology

2.1. Participants

A total of 83 caregivers' of children with special needs served as participants for the study. Caregivers' who were already using AAC to communicate with their child and/or allowing their child use AAC to communicate were excluded and only those caregivers who have still not opted for an AAC system were included. The study complied with the AIISH Bio-Behavioral Sciences Ethics Committee Guidelines for Human Subjects (Basavaraj & Venkatesan, 2009). The selection and involvement of caregivers' adhered to all moral requirements. Before testing, written consent was obtained from the participants after explaining the purpose of the study.

2.2. Data collection and processing

2.2.1. Setting

Information was gathered from caregivers' whose children were receiving speech and language therapy. These data were collected from two speech-language pathology Institutes of Karnataka.

2.2.2. Materials

AIISH Checklist for caregivers' of Novel AAC Users on Awareness and Knowledge about AAC and Readiness to Use AAC (Divya & Amulya, 2023) was used. The developed checklist was subjected to content validity to seek input from eight speech-language pathologists who had at least five years of clinical experience in the assessment and management of children using Augmentative and Alternative communication. The content validity was measured in terms of relevancy, clarity, simplicity and ambiguity parameters. Based on the CVI calculation, it was found that S-CVI/Avg (S CVI/Ave = sum of I-CVI scores/number of item) of eight professionals for 20 questions was 0.875, meeting the satisfactory level of agreement, 0.83 (Lynn, 1986).

During counselling, videos about AAC were shown to the caregivers'. Also, a feedback form was provided to caregivers' to check for their readiness to use AAC after counselling.

2.2.3. Research Design

The study adopted a quasi-experimental design, incorporating a descriptive survey with a pre-post comparison.

2.2.4. Procedures

The study was conducted in three phases. In the first phase, an e-survey was conducted in order to understand caregivers' level of awareness and knowledge about AAC and readiness to use AAC. For this, the AIISH Checklist for caregivers' of Novel AAC Users on Awareness and Knowledge about AAC and Readiness to Use AAC (Divya & Amulya, 2023) was used. This is a self-rating checklist with two parts or sections. Part A consists of questions related to awareness and knowledge about AAC and part B has questions related to the readiness to use AAC. Based on the type of options provided for each question, the obtained responses were scored in two ways; 0 or 1 to indicate the absence and presence of awareness, knowledge about AAC and readiness to used AAC respectively; or 0, 1 and 2, where 2 indicated the presence of high awareness, knowledge about AAC and readiness to use AAC and 0 indicated absence of the same. Bloom's cut-off point (Bloom, 1956) was used, where the caregivers' who scored ≥80% was considered as having high awareness and knowledge, 60%-79% as moderate awareness and knowledge and 59% or less as having low awareness and knowledge. The reason for using ≥80% cut-off for awareness and knowledge was by considering that the caregivers' must have got to know the information through counselling by speech-language pathologist/special educators, internet sources or webinars. For readiness, a cut-off score of ≥90% was considered. Less than 90% was considered as not having readiness. However, in the present study, the caregivers' who scored less than 90% were divided further into having moderate readiness (60-89%) and low readiness (59% or less). The reason behind using ≥90% cut-off for readiness was by considering the fact that it is difficult to ascertain the readiness amongst the caregivers who come under the category of 'moderate readiness' to use AAC. Based on this scoring pattern, caregivers' were divided into the following sub-categories: into (1) low awareness, knowledge and low readiness, (2) low awareness, knowledge and moderate readiness, (3) low awareness, knowledge and high readiness, (4) moderate awareness, knowledge and low readiness, (5) moderate awareness, knowledge and moderate readiness, (6) moderate awareness, knowledge and high readiness, (7) high awareness, knowledge and low readiness, (8) high awareness, knowledge and moderate readiness and (9) high awareness, knowledge and high readiness. Later, the percentage of caregivers' under each category was calculated.

Before counselling, the caregivers' were divided into broader categories like not having awareness and knowledge, having awareness and knowledge but not the readiness to use AAC and having awareness, knowledge and readiness but unaware of how to use AAC. These broader categories included sub-categories. Based on this, caregivers' were given counselling according to

the categories they were grouped under in the second phase, which is mentioned in the Table 1. For caregivers' under all the categories the videos about AAC and its use for communication were shown for their better understanding.

Table 1
Counselling caregivers' based on the categories

Categories	Sub-categories	Counselling
Not having awareness and knowledge	• Low awareness, knowledge and low readiness • Low awareness, knowledge and moderate readiness • Low awareness, knowledge and high readiness	Caregivers were counselled about: • what AAC is • about various modes of communication (aided and unaided). • how it can benefit the child in developing speech and language skills • cleared their misconceptions
Having awareness and knowledge but not the readiness to use AAC	• High awareness, knowledge and low readiness • Moderate awareness, knowledge and low readiness	• Explained using examples of those who improved using other modes of communication • Cleared their misconceptions and negative attitude towards AAC
Having awareness, knowledge and readiness but unaware of how to use AAC	• High awareness, knowledge and high readiness • High awareness, knowledge and moderate readiness • Moderate awareness, knowledge and high readiness • Moderate awareness, knowledge and moderate readiness	• Provided them with the strategies and videos in order to understand better and to in turn implement the use of AAC with their child

In the third phase, caregivers' readiness to use AAC with their child was rechecked. A feedback form was also provided to fill in order to know whether the counselling was effective. This form which is mentioned in Table 2,

contained three questions out of which first and second question was provided more weightage as it tapped the readiness aspect.

Table 2
Feedback form

Questions	Options
1. Now, do you think AAC might help your child to improve speech?	a. Yes b. No
2. Now, would you want your child to use other modes of communication to communicate?	a. Yes b. No
3. Would you like to know more about other modes of communication/AAC?	a. Yes b. No

2.3. Data analysis

The obtained responses for these questions were given a score of 0 or 1 to indicate the presence or absence of readiness. Bloom's cut-off score (Bloom, 1956) of ≥90% was hence used to check for the participants who were highly ready to accept the use of AAC. Percentage of caregivers who are ready to use AAC post-counselling was calculated and a pre-post counselling comparison of readiness to use AAC was carried out. The analysis was limited to descriptive statistics to summarise the data and highlight observable trends, as the dataset was insufficient to support the appropriate inferential statistical tests.

3. Findings

The results of the first phase, which are mentioned in Table 3 of the study, are reported as follows:

3.1. Low Awareness, knowledge and low readiness

Among 10% in low awareness, knowledge and low readiness, 75% had no awareness that the other mode of communication is called "Augmentative and Alternative Communication (AAC)". It was observed that 62.5% remained neutral to the fact that using other modes would reduce stress. Also, 50% agreed that using other modes of communication will stop their child from developing speech and other 50% were neutral about the same.

3.2. Low awareness, knowledge and moderate readiness

In this category, 18% had low awareness, knowledge and moderate readiness. Among these caregivers', 100% reported that they had never heard of the term "AAC," and 73.33% had never been previously recommended to use other modes of communication with their children. Despite this, 66.66% caregivers' expressed that using other modes of communication will not hinder their child's speech development, and 60% were comfortable using other modes of communication with their child.

3.3. Low awareness, knowledge and high readiness

Caregiver having low awareness and knowledge but high readiness (1.20%) was reported to have misconception that speaking is the only way through which their child can communicate, had no awareness of the term AAC and was not recommended other modes of communication earlier. This caregiver was shown to have high readiness. The results are as follows: this caregiver was comfortable to use other modes of communication with the child, believed that it would help the child to interact in the outdoor environment, would get enough support from their family members and using AAC would not be against their culture.

3.4. Moderate awareness, knowledge and low readiness

Further, 12% were in the category of moderate awareness, knowledge and low readiness. These caregivers' (60%) preferred both aided and unaided communication modes that could aid their child to communicate. Also, 70% of caregivers' reported that their child can use other modes of communication only when the child has limited speech and cannot speak at all. With moderate awareness and knowledge, 90% of parents were still in the notion that their child will be left alone when other modes of communication are used to communicate in the outdoor environment. In addition, 70% of caregivers' were unsure whether they would get enough support from the family members to use other modes of communication with their child, resulting in low readiness.

3.5. Moderate awareness, knowledge and moderate readiness

Majority of the caregivers' were reported in the category of moderate awareness, knowledge and moderate readiness (29%) Within this category, 54.16% believed that speaking is not the only way a child can communicate. These caregivers' (66.66%) also shared that they had received recommendations to use other modes of communication and were aware that they (58.33%) could seek support from speech-language pathologists to learn how to use augmentative and alternative communication (AAC) systems. Also, 46% were of the opinion that using other modes of communication would reduce both their own and their child's stress. At the same time, 29.16% felt

that other modes of communication should only be used when the child is completely unable to speak.

3.6. Moderate awareness, knowledge and high readiness

It can be seen in the results that among 6.05% in moderate awareness, knowledge and high readiness, 40% were of the opinion that speaking is not the only mode through which the child can communicate. These caregivers further mentioned both, aided and unaided would help the child to communicate. Further, 60% of caregivers' reported "all of the above" (that is, the child can use other modes of communication a) when the child cannot speak at all, b) has limited speech, c) unclear speech and d) can speak), 80% were earlier recommended to use other modes of communication and 40% felt that only parents and child should learn other modes of communication. With this moderate awareness and knowledge, 100% of caregivers' felt that using other modes of communication would help in developing speech, will help in improving vocabulary, understanding and communication, child will not look different compared to his/her age group children because of using other modes of communication, using it in the outdoor environment would help in interaction, will get support from the family members and will not be against their culture.

3.7. High awareness, knowledge and low readiness

Other, 3.6% were in the category of high awareness, knowledge and low readiness. Among 3.6% of caregivers', it was observed that 100% of the caregivers' were previously recommended to use other modes of communication, had awareness and knowledge that they can take help from speech language pathologist and special educators to learn how to use AAC communication system and also knew that the whole family must be involved in implementing AAC to a child. Further, 66.66% of caregivers' knew that using other modes of communication would reduce stress on both sides (parent and child). However, caregivers' here, having high awareness and knowledge were still in the misconception that using other modes of communication will stop developing their child's speech (100%), will not be comfortable in communicating with their child using other modes (100%) and their child would look different compared to his/her age group children because of using other modes of communication (100%). Also, they had a fear of their child being bullied or teased in the outdoor settings for using AAC (66.66%).

3.8. High awareness, knowledge and moderate readiness.

In this category,18% caregivers' (73.33%) believed that speaking is not the only mode through which a child can communicate. About 80% knew that other modes would reduce stress, 73.33% had an idea that they could take help from speech-language pathologist and special educators to learn how to use AAC communication system and 93.33% felt that whole family must be

involved while implementing AAC to a child. Caregivers' with high awareness and knowledge still demonstrated only moderate readiness. The results from the survey found that only 46.66% of caregivers' would get enough support from their family members to use AAC, and 60% reported that other modes of communication would improve their child's communication, understanding and vocabulary.

3.9. High awareness, knowledge and high readiness

Among 2.4% of caregivers', 100% knew that other mode of communication is called AAC, were previously recommended to use other modes, were aware that AAC would reduce stress and reported that to use other modes of communication whole family should be involved. These caregivers' also had high readiness, which is mentioned as follows: 100% caregivers' were of opinion that using modes would not stop developing speech, will help in improving vocabulary, understanding and communication, would be comfortable in using other modes with their child, will not look different compared to his/her age group children because of using other modes of communication, using it in the outdoor environment would help in interaction, will get support from the family members and will not be against their culture.

Table 3
Percentage of caregivers' having various levels/degrees of awareness, knowledge and readiness

Sub-categories	Percentage
Low awareness, knowledge and low readiness	10%
Low awareness, knowledge and moderate readiness	18%
Low awareness, knowledge and high readiness	1.20%
Moderate awareness, knowledge and low readiness	12%
Moderate awareness, knowledge and moderate readiness	29%
Moderate awareness, knowledge and high readiness	6.05%
High awareness, knowledge and low readiness	3.6%
High awareness, knowledge and moderate readiness	18%
High awareness, knowledge and high readiness	2.4%

In the second phase, post counselling, readiness of the caregivers to accept the use of AAC was rechecked through the feedback form and the percentage of pre- and post-counselling was carried out. Pre-counselling, 70% of participants believed that AAC might help their child improve speech, whereas post-counselling, this increased to 100%. Similarly, pre-counselling, 51.8% of participants were willing to use other modes of communication, which rose to 100% post-counselling. This is mentioned in figure 1 and 2.

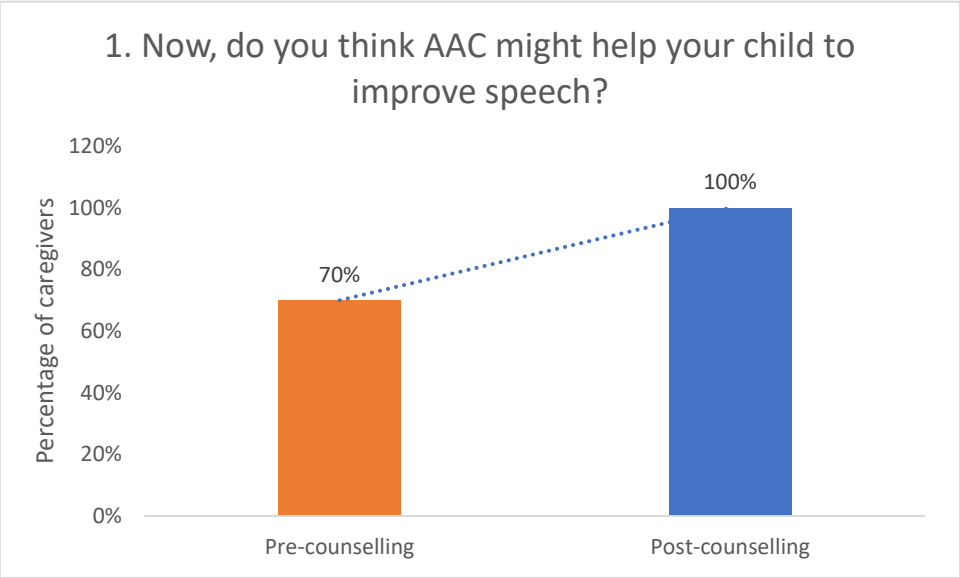

Figure 1. Readiness of caregivers' to use AAC pre- and post-counselling

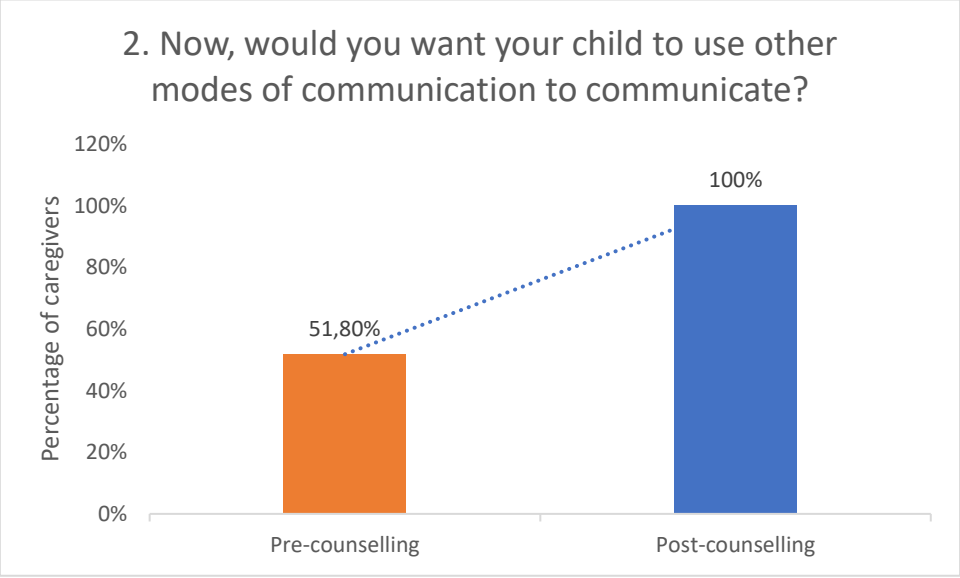

Figure 2: Readiness of caregivers' to use AAC pre- and post-counselling

4. Discussion

Majority of the caregivers' in the category of moderate awareness, knowledge and moderate readiness might have been recommended about other modes of communication by professionals, or might be in the notion that other modes of communication can help their child communicate better, but may not be clear or hesitant to use it. The literature also supports the same, that when parents came across AAC, they went through situations of accessibility problems, mistrust and hesitations to use the same (Park, 2021).

Least number of caregivers' were seen in the category of high awareness, knowledge and high readiness and low awareness, knowledge and high

readiness. Caregivers' in this category might be highly aware about other modes of communication but might not be aware about how to use it. Literature reveals that parents were able to comprehend that there are many various ways to communicate with their children and that speaking is simply one of many forms of communication (Park, 2021). However, we can observe from the present study that only a few caregivers' are under this category and they still do not have knowledge or expertise on how to use AAC. A study reports that in order to better understand their children's needs and wants, parents believed that a high and ongoing level of assistance was necessary, as well as further training for therapists in AAC systems (Berenguer et al, 2022). This high and ongoing level of assistance can be provided out through counselling the parents. Also, only 1 caregiver was seen in the category of low awareness, knowledge and high readiness. Through this it can be noted that pre-counselling, factors like low awareness and knowledge, misconceptions, cultural inappropriateness and less family support might have hindered the caregivers' readiness to accept the use of AAC. Also, clinicians not providing appropriate information to caregivers while attending speech therapy might be the result of caregivers' having low readiness. This helps in understanding that caregiver education plays a vital role in accepting the use of AAC for their children (Kim et al., 2021). The change in this perception and attitude towards AAC can be attributed to the fact of increase in caregivers' awareness and knowledge about AAC during the counselling sessions as well as while self-administering the checklist. A study also states that there was a positive perception towards the use of AAC once their misconceptions were eradicated (Kim et al., 2021).

5. Conclusion

The present study highlights the importance of counselling in reducing negative attitudes toward the use of AAC. Counselling serves to educate caregivers' effectively and offer appropriate perspectives on adopting AAC, thereby dispelling common myths and misconceptions. It is essential to emphasize the role of speech-language pathologists (SLPs) in guiding and educating caregivers' and families about AAC (Moorcroft, 2019; Baxter et al., 2012) to eliminate misinformation and prevent delays in initiating early intervention. The findings underscore the need to integrate structured counselling modules as part of AAC intervention programs to support caregivers' understanding and readiness.

This study was conducted as a preliminary step to explore the readiness of caregivers' of children with special needs who have not yet begun AAC use by sampling caregivers' from only two speech and hearing institutes. Future research should aim to replicate this study with a larger and more diverse sample across various geographic regions and clinical settings. Additionally, longitudinal follow-up and the inclusion of clinicians' perspectives would offer a more comprehensive understanding of the long-term impact of counselling on AAC adoption and implementation.

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