

## Our experience with implementation of manual augmentative and alternative communication (AAC) in adult with intellectual disability: a story of success

Sir,

Intellectually disabled individuals present a combination of communicative deficits involving areas of semantics, receptive, and expressive syntax and morphology, speech production, and pragmatics. Many studies reported that augmentative and alternative communication (AAC) assists and makes communication better in children with severe speech and language disabilities.[1] AAC provides a mean for communication to non-verbal children and adults that directly help in reducing the psychological disturbances and help them in promoting from basic communicative skills to expressive speech and language.[2,3]

In this letter to editor, we have discussed a client with moderate intellectual disability who presented with limited expressive language. Our client is 25 years old male, who was able to speak only three meaningful words. He used to occasionally use idiosyncratic gestures to express his needs. He was able to follow single-step command with gestural cues to understand compound/complex sentences. The receptive vocabulary was to an extent of about 100 words constituting family members, food, vegetables, prepositions such as 'up', 'down', verbs such as eating, drinking, running, walking, playing, dancing, among others. He was able to understand facial expressions of varied emotions like happy, sad, anger, among others. The client expressed needs through vocalisation and bilabial sounds and his pragmatic skills included greetings, social smile. The client received schooling in special education setup for persons with intellectual disability from the age of nine years. He was able to read aloud, and write Telugu letters and few familiar words in

Telugu script. Currently, he is pursuing vocational training in handmade bags and printing.

The client did not take speech therapy on consistent basis before being enrolled in the Ali Yavar Jung National Institute of Speech and Hearing Disabilities, Southern Regional Center (AYJNISHD[D], SRC), Manovikas Nagar, Secunderabad, Telangana, India and on language assessment tool, Receptive-Expressive Emergent Language Scale (REELS), the child scored: expressive language age (ELA) of 12 months and receptive language age (RLA) of 24 months. The psychological evaluation revealed moderate intellectual disability. The client's hearing thresholds were within normal limits. The caregivers were particularly concerned about the client's lack of communication skills in day-to-day life. Even the gestures were not meaningful except for pointing. So, with the concern of parents, we decided to use manual AAC. The rehabilitation issues were discussed with caregivers and use of manual AAC for facilitating communication. The pre-requisite AAC evaluation given by Van Tatenhove[4] was performed and results of pre-requested evaluation revealed that manual AAC tool will be appropriate for the client.

Manual AAC was designed for the client which consisted picture book with various lexical vocabulary including food, clothing, utensils, toiletry, gadgets, frequently used verbs like eat, drink, play, watch, ride, wear, etc. Therapy was planned for 12 sessions with long-term goal "to make the client communicate verbally along with the combined form of AAC (i.e. gestures + picture book) within client's impairment". To achieve this long-term goal, three short-term goals were included in the therapy plan. The short-term goals: 1) to develop a sign lexical

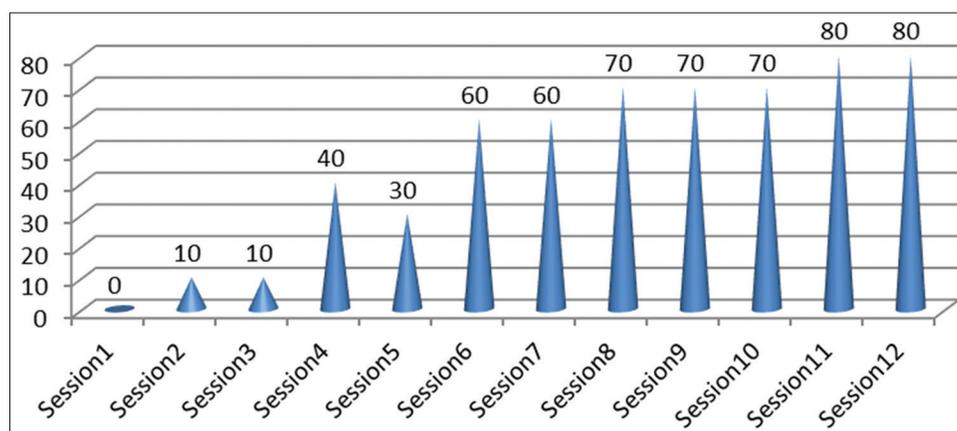


Figure 1: Graphical representation of progress from session 1 to session 12 for short-term goal.

vocabulary for client's communication needs with 90% criteria in clinical setting, 2) to make client communicate verbally along with combined form of AAC at word and phrase level with 80% criteria in clinical settings, and 3) to make client communicate verbally along with combined form of AAC at simple sentence and complex sentence level with 80% criteria in clinical setting. To achieve short-term goals, the mand-model technique and incidental teaching approach were used.

The client attended 12 sessions of therapy with the frequency of one session per week. He adapted to use the AAC manual incorporating pointing and common signs to facilitate expression. The pragmatic approach of incidental teaching method was used to improve expressive skills. For example, if the client needed an extra assistance of rice/roti/dal/water during lunch or dinner, he would point to the appropriate picture in the manual. He was also trained to use purposeful signs such as those for verbs like eat, drink, walk, etc. The results at the end of sessions revealed improved expression of the client's daily needs with 80% accuracy for first short-term goal as shown in Figure 1. At the end of the sessions, client was able to use the manual adequately to indicate his desires. The AAC intervention programme assists and makes communication more competent in individuals with severe communication disorder. This will open and provide better opportunities to individuals with severe communication disorder to interact with a wide range of people at school, home, and in the community. This study reiterated the utility of manual low-tech AAC tool that can be helpful for persons with intellectual disability whose expression is limited.

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## REFERENCES

1. Glennen S, DeCoste D. Handbook of augmentative and alternative communication. San Diego, CA: Singular; 1997.
2. Lloyd LL, Karlan GR. Non-speech communication symbols and systems: where have we been and where are we going? J Ment Defic Res. 1984;28 (Pt 1):3-20.
3. Ronski MA, Sevcik RA, Joyner SE. Nonspeech communication system: implication for language intervention with mentally retarded children. Top Lang Disord. 1984;5:66-81.
4. Van Tatenhove G. AAC assessment protocol [Internet]. 2014 Oct 30 [cited 2019 Jun 27]. Available from <https://praacticalaac.org/practical/aac-assessment-forms>.

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