

AAC AND AUTISM SPECTRUM DISORDER (ASD)

Ilze Pansegrouw and Shaheena Boda

Introduction

Autism Spectrum Disorder (ASD) is a neurological condition affecting an individual's ability to comprehend and express language, relate to others and learn (Spears & Turner, 2011). It is a severe and complex pervasive developmental disorder with most recent figures suggesting the prevalence of ASD worldwide as 1:168. South Africa is no exception. With a population of 46,000,000 there are an estimated 460,000 individuals with ASD in our country. Diagnostic criteria for ASD are as follows:

- a) persistent deficits in social communication and social interaction across multiple contexts
- b) restricted and repetitive patterns of behavior, interests or activities
- c) symptoms must be present in early developmental history
- d) symptoms cause clinically significant impairments in social, occupational or other important areas of functioning (American Psychiatric Association, 2013).

In addition to this, these disturbances should not be better explained by intellectual disability or global developmental delay (American Psychiatric Association, 2013).

Impairment of language and communication is one of the essential diagnostic features of autism (Bogdashina, 2005). ASD affects the child's ability to make sense of and use all forms of communication and language (Christie, Newson, Prevezer, & Chandler, 2009). Children with ASD have unique communicative deficits such as impaired use of rudimentary communication skills and impairment in single-symbol and short multi-symbol communication abilities (Owens, 2004). They may possess no recognizable communication system and may not even use gestures, such as touching, pointing or moving objects (Owens, 2004). A significant proportion of individuals with ASD are non-verbal and may never develop any functional speech (Bogdashina, 2005).

For many children with ASD, Augmentative and Alternative Communication (AAC) systems may promote communicative competence (Nigam, 2001). Keeping in mind that ASD is the fastest growing developmental disability in the USA (Sansosti, Powell-Smith, & Kincaid, 2004), it has become increasingly necessary to provide effective, sustainable and versatile AAC intervention (Alant, 2005) to those individuals with ASD who have limited or no speech skills.

The use of AAC at Unica School

Unica School is situated in Pretoria and caters for learners with ASD. Due to the high percentage of young children with ASD who enter Unica school not having acquired any functional means of communication, the implementation and use of AAC strategies, known to enhance the likelihood of the development or improvement of speech, form an essential part of the program at the school. The introduction of language through the visual mode to those children with ASD who have little or no functional speech (LNFS) is in accordance with best practice for children with ASD (Allen & Rapin, 1993). Visual strategies support and improve children's receptive

language and it is proposed that the use of Visually Mediated Communication (VMC) and visual clarification, enhances comprehension, participation and expressive communication (Hodgdon, 2003; Christie et al, 2009).

At Unica School a multi-modal approach is used whereby AAC means things such as concrete objects, photographs, and a variety of picture symbols and signing are used to provide access to communication to learners with limited or no speech. To stimulate and create motivation and intention to want to communicate, young children are encouraged during the initial stages of the program to enter into and enjoy interaction (Christie et al, 2009). This is achieved through the use of low technology voice output devices such as the Cheap Talk (Enabling Devices) and GoTalk (Attainment Co. Inc.) as well as cause-effect materials such as “All that Glitters” and “Therapeutic manipulator” (Lakeshore®) and toys including bubbles and spinning toys.

During the initial stages concrete object-to-picture or photograph-to-picture symbol matching is encouraged during all activities. By means of the Picture Exchange Communication System (PECS) (Frost & Bondy, 2002) children are taught to “exchange” picture symbols, concrete objects or photographs with an adult for things that they want. The main idea is to teach the child to initiate requests (and later other functions of communication) rather than always respond to being asked what they want. They gradually build up a repertoire of their favourite objects and actions and these picture symbols/photographs are kept in a small PECS file. (*Also see Chapter 4 in this manual.*)

In addition, unaided strategies such as Tiny Handz signing and signs from Tiny Handz (Will, 2009) are used by staff members at Unica School. The aim of signing during all formal and informal communication interactions with learners, is to clarify (provide visual support) and to emphasize key words in spoken language. Even though it is observed that a small percentage of children spontaneously imitate signs and then start using signs as a preferred method of communication, learners are not directly taught to use signing to communicate.

Caregiver and staff training

It is essential to involve caregivers, parents, other family members, communication partners and teachers in promoting and sustaining the successful use of AAC strategies and methods (Alant 2005). Staff members (teachers, assistants, hostel caregivers and therapists) have attended training courses in both South African Makaton signing as well as Tiny Handz signing to use these systems as part of a multi-modal approach to improve the comprehension abilities and expressive communication abilities of learners with LNFS.

Teachers, caregivers and speech-language therapists at Unica School work collaboratively (Alant, 2005) to select vocabulary and to select and match appropriate AAC systems and strategies to learners' specific cognitive abilities and user preference. Workshops and individual sessions are used to train family members and significant others to promote communicative competence (Light & McNaughton, 2014) and to achieve sustainable AAC (Alant, 2005).

With the aim of developing effective implementation strategies to achieve successful AAC use, Unica School embraces cultural diversity and continues to adapt AAC

strategies to suit the learner's family and social characteristics as well as cultural practices within the South African context (Soto, Huer & Taylor, 1997).

Conclusion

AAC as well as the use of Visually Mediated Communication (VMC) form an integral part of the daily program of all learners at Unica School. Based on our experience that, irrespective of the age at which learners enter the school, continuous and persistent use of AAC systems results in speech production for a significant proportion of our learners. The importance of the provision of AAC to learners with ASD with LNFS cannot be over emphasised because the use of AAC allows access to communication in ever changing environments.

It will remain our goal to provide relevant and effective AAC services to our learners with LNFS and their caregivers with the aim of supporting social environmental integration and quality of life for those individuals affected by ASD.

For more information on Unica School and other related resources and services, please refer to Chapter 12 of this manual.

Further reading and useful websites

- How I do it: autism and AAC
<http://praacticalaac.org/praactical/how-i-do-it-autism-and-aac-five-things-i-wish-i-had-known-by-deanne-shoyer/>
- No Tech and Low Tech AAC for Children with Autism Spectrum Disorders (ASD): A Guide for Parents
http://kc.vanderbilt.edu/kennedy_files/AACChildrenwithASD-April12.pdf
- The Center for AAC and Autism: <http://www.aacandautism.com/>
- Sue Fletcher-Watson, from The University of Edinburgh, has recently updated her **autism app wheel**, available from:
<http://www.dart.ed.ac.uk/wp-content/uploads/2013/07/app-wheel-April15.pdf>
- Enabling devices: <https://enablingdevices.com/catalog>
- Attainment company: <http://www.attainmentcompany.com/>
- Tiny Handz: <http://www.tinyhandz.co.za/>
- Autism SA: <http://www.aut2know.co.za/>

References

- Alant, E. (2005). Intervention issues. In E. Alant & L. Lloyd (Eds.), *Augmentative and Alternative Communication: Beyond Poverty*. London: Whurr Publishers.
- Allen, D.A., & Rapin, I. (1993). Autistic Children are also Dysphasic in H. Naruse & E.M. Ornitz (Eds), *Neurobiology of Autism*. Burlington, MA: Elsevier Science Publishers.
- American Psychiatric Association (APA). (2013). *Diagnostic Criteria for 229.00 Autistic Disorder (DSM-V)*. Arlington, VA: APA.
- Bogdashina, O. (2005). *Communication Issues in Autism and Asperger Syndrome: Do we speak the same language?* London, UK: Jessica Kingsley Publishers.
- Christie, P., Newson, E., Prevezer, W., & Chandler, S. (2009). *First steps in intervention with your child with autism: frameworks for communication*, London, UK: Jessica Kingsley Publishers.
- Frost, L.A., & Bondy, A. (2002). *The Picture Exchange Communication System Training Manual*. Newark, DE: Pyramid Educational Products Inc.
- Hodgdon, L. (2003). *Visual Strategies for improving Communication*. Troy, MI: Quirk Roberts Publishing.
- Light, J., & McNaughton, D. (2014). Communicative competence for individuals who require Augmentative and Alternative Communication: A new definition for a new era of communication. *Augmentative and Alternative Communication*, 30 (1), 1-18.
- Nigam, R. (2001). Dynamic assessment of graphic symbol combinations by children with autism. *Focus on Autism and other Developmental Disabilities*, 16, 190-197.
- Owens, R.E. (2004). *Language Development: An introduction*. (3rd ed.). Merrill Publishing Co., USA
- Sansosti, F.J, Powell-Smith, K.A. & Kincaid, D. (2004). A research synthesis of social story interventions for children with autism spectrum disorders. *Focus on Autism and Other Developmental Disabilities*, 19 (4), 194-204.
- Soto, G., Huer, M.B., & Taylor, O. (1997). Multicultural Issues. In L.L. Loyd, D.R. Fuller & H.H. Arvidson (Eds.), *Augmentative and Alternative Communication: A handbook of Principles and Practices*, pp. 406-413, Boston: Allyn & Bacon.
- Spears, C.L., and Turner, V.L. (2011). *Rising to new heights of communication and learning for children with autism*, London, UK: Jessica Kingsley Publishers.
- Will, M. (2009). *Tiny Handz™: Discover communication with the wonders of sign language*.