

Perception of speech and language pathologists towards augmentative and alternative communication in Pakistan

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Abstract

Objective: To determine the level of understanding and use of augmentative and alternative communication devices in Pakistani speech pathologists.

Methods: The cross-sectional survey was conducted from January to June 2015 in six major cities of Pakistan: Islamabad, Rawalpindi, Lahore, Karachi, Quetta and Peshawar. It comprised speech and language pathologists who were asked to fill a questionnaire that consisted of 10 questions. Data was analysed using SPSS17.

Result: Overall calculated mean and standard error of mean from the respondents who agreed and strongly agreed regarding understanding, opinion-assessment and treatment about augmentative and alternative communication was 153 ± 36.373 and 12.124 respectively.

Conclusion: Speech pathologists had understanding of assessing and working with individuals using augmentative and alternative communication.

Keywords: AAC, Augmentative and alternative communications, Speech and language pathologist, Understanding of augmentative and alternative communications. (JPMA 69: 164; 2019)

Introduction

History shows that ancient civilisations believed in the value of symbolic skills and oral presentations. Individuals of times played their role in their civilisation's contributions in terms of speech-producing and education.¹

From 400AD to 1500AD, great medical advancements were made by the Muslims. Many stories describe religious cures, including cures of disabilities, blindness, deafness and muteness. The worldwide language movement created awareness in teaching spoken communication to the deaf.²

During the 1960s, the use of sign languages was increased among persons with hearing impairments and subsequently there was increase in receiving and using of augmentative and alternative communication (AAC) in the deaf community, as well as there was increase in the use of AAC among individuals with cerebral palsy (CP) and aphasia.³ In the meantime, AAC clients and their relatives took an unmistakable part in the advancement

of learning of AAC through their written work and presentations.⁴

In the 1990s, the first dynamic screen speech-generating device was developed. Before the development of dynamic device, the Germans, the French, the Italians, the Spanish, the Swedes and others had speech options for communication which were eye pointing, scanning, sign language, communication board and books. After the development of dynamic device, a future pathway of communication was established and manufacturers worked on devices which were cognitively and linguistically appropriate.⁵

AAC researchers challenged the manufacturers to build communication devices that were more attractive aesthetically, with greater options for leisure and play and that were easier to use. The rapid advancement in smartphone and tablet computer technologies made it possible to fundamentally change the availability of inexpensive, accessible, flexible communication devices.⁶

AAC works for the patients of multiple disabilities and it helps in the understanding of speech and language, and development of expressive communication. It is also

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helpful in the rehabilitation process among children and young persons with severe cognitive disabilities.⁷

American Discourse Dialect Listening to Affiliation gauges that around 2 million Americans cannot talk clearly to meet their corresponding needs. Without fitting AAC frameworks, these individuals cannot convey even their most essential desires and needs. AAC is utilised by persons with an extensive variety of discourse and dialect weaknesses, including inborn impairments, cerebral paralysis, scholarly disability and a mental imbalance and obtained conditions, for example, amyotrophic parallel sclerosis and Parkinson's diseases. AAC can be a perpetual expansion to a man's correspondence or a transitory guide. There are various AAC frameworks; unaided correspondence utilises no hardware and incorporates sign and non-verbal communication, while helped approaches utilise outer devices and range from pictures and correspondence sheets to discourse-creating gadgets.⁸

Initial rate of speech production of AAC devices was very slow and it looked like robotic speech, not resembling the natural speech. However, later on, upgraded procedures were utilised to increase the rate of speech production and improved the quality and quantity of vocabulary were used in AAC systems.⁹

Respecting the ethnicity and family beliefs are considered to be a joining force for families. The use of AAC does not impede the development of speech and may result in a modest increase in speech production. The users grown up with AAC have reported satisfaction in their relationships and life activities, but they may have poor literacy and are unlikely to be in employment.¹⁰

There is a strong role of parents in the successful execution of AAC. Applying AAC has a positive impact on children, but there are some challenges in the application, like child's conception and ability to use the settings, and the system itself. It also needs perception, time and support of parents.¹¹

Studies show that children who use AAC devices have better empowerment, social interaction and learning opportunities. The devices can provide children, who have various disabilities, with new opportunities to communicate, interact and perform activities autonomously as long as the environment is right.¹²

Current AAC technologies permit animation within visual symbol displays and it is helping children in the learning of AAC devices a lot.¹³ Communication is important for self-perception, independence and for all types of communication with others. Use of AAC devices enables them to use their capabilities to communicate with others by using unaided method, body language, sign language, or by using aided devices, communication boards etc.¹⁴

The current study was planned to explore the existing awareness of AAC strategies among speech and language pathologist and professionals working in Pakistan.

Subjects and Methods

The cross-sectional survey was conducted from January to June 2015 in six major cities of Pakistan: Islamabad, Rawalpindi, Lahore, Karachi, Quetta and Peshawar. It comprised speech and language pathologists of either gender working in public or private institutions or clinics with at least one-year experience. Special education teachers, students of the 1st batch of MS, Speech and Language Pathology (SLP) programme at the Riphah International University (RIU), Islamabad, were excluded.

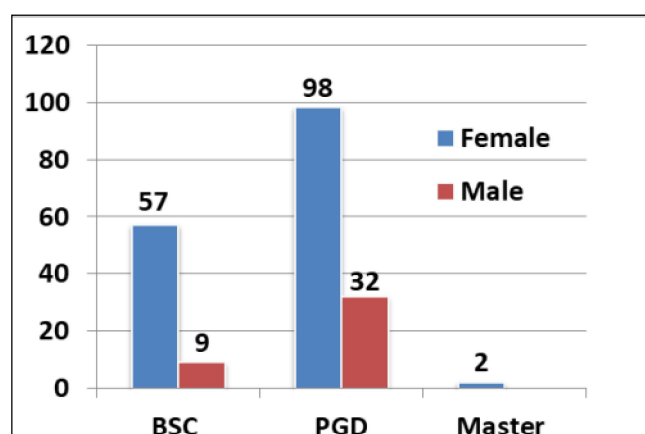
The survey used a questionnaire, developed on the basis of literature review^{1,2, 16-21} and expert opinion, and it had 10 questions. A pilot study was conducted prior to the research work to have better understanding of the questionnaire. Pilot study was conducted on 24 students of 4th semester of MS-SLP in RIU who had studied AAC as a subject.

Sample size was calculated on the basis of total population (450) of speech language pathologists, using 95% level of confidence and 5% confidence interval (CI) through online calculator.¹⁵ Convenience sampling was used and the responses were collected in person through postal service and emails.

Results

Of the 210 subjects approached, 198(94.3%) responded positively. Of them, 98(49.5%) female and 32(16.2%) males had a post-graduates diploma (Figure).

Mean score of the subjects, who were 'strongly agreed' 51.88, 'agreed' 101.11, 'didn't know' 26.5, 'disagreed', and 'strongly disagreed' 24.28 and 'strongly disagreed' 11.5 about AAC devices (Table).



BSc: Bachelors in Sciences, PGD: Post Graduates Diploma

Figure: Gender distribution among speech pathologist and qualification.

Table: Awareness and use of Augmentative and Alternative Communication.

Questions	Strongly Agree	Agree	I Don't Know	Disagree	Strongly Disagree
Augmentative and alternative communication is used to find a suitable system of communication for clients who are unable to speak.	83 (41.91%)	113 (57.07%)	2 (1.01%)	-	-
Augmentative and alternative communication is used for social interaction.	90 (45.454%)	108 (54.545%)	-	-	-
An augmentative and alternative communication is used for complex communication needs, when individuals cannot meet their daily communication needs through their current method of communication	47 (23.737%)	126 (63.63%)	17 (8.585%)	8 (4.04%)	-
Augmentative and alternative communication is the use of symbols to enhance effectiveness of communication.	74 (37.373%)	91 (45.959%)	21 (10.6%)	12 (6.06%)	-
Augmentative and alternative communication can also be used with a client who is able to speak but may not be clear in terms of understanding	65 (32.828%)	108 (54.545%)	8 (4.04%)	17 (8.585%)	-
General communication is not considered part of augmentative and alternative communication	8 (4.04%)	104 (52.525%)	8 (26.262%)	17 (17.17%)	-
An augmentative and alternative communication device should be introduced only when the child is able to understand pictures.	8 (4.04%)	104 (52.525%)	65 (32.828%)	13 (6.565%)	8 (4.04%)
Augmentative and alternative communication (augmentative and alternative communication) is any strategy that helps a child/adult participate and communicate better with the speaker/listener	49 (24.747%)	56 (28.282%)	39 (19.696%)	39 (19.696%)	15 (7.575%)
Augmentative and alternative communication uses augments and can enhance speech production.	43 (21.717%)	100 (50.505%)	8 (4.04%)	47 (23.737%)	-

Discussion

The use of AAC technology depends upon the awareness of speech and language pathologists (SLPs), parental concerns, skills and preferences. The result of the present study shows that SLPs were aware of some aspects AAC, but some features were still unknown. Opinions of SLPs showed that AAC was more beneficial for the persons with severe communicative disabilities. Devices were

suggested according to the strengths and weaknesses of the patient.¹⁶

According to the current study, AAC is helpful in social interaction, and 99.99% SLPs agreed with the statement. Besides, 87.36% individuals were in favour of using AAC for complex communication needs. Similar research was conducted on Australian preschool children, which described AAC as a commonly used system to support children with complex communication needs.¹⁷

However, the use of AAC is only effective if internal vocabulary of device matches with the children's communicative needs. Most of the children have small vocabulary. Therefore, they use core words or content

words for communication instead of highly

personalised fringe vocabulary. So both core and fringe vocabularies are important in AAC systems.¹⁸

AAC is commonly used because of its reliability and availability of technical support and easy handling by its user.¹⁹

AAC is also used by a person who is able to speak but may not be clear.^{1,2}

Research has demonstrated that intervention effectiveness is not diminished when the learner has severe intellectual disability. In

fact, during intervention, individuals with severe disabilities may progress in their communication skills at a rate equal to or faster than that of individual with moderate or mild intellectual limitations.²¹

Conclusion

Speech and language pathologists should have understanding of AAC strategies. The AAC strategy should

begin as soon as possible to give the affected individuals a mode of expressing themselves. This can reduce frustration and help to understand each other. AAC therapy may be practised till it is required.

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