Module 09- Communication Impairment and AT

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Course Outline

- Learning Objectives / Outcomes
- Introduction to Communication
- Communication Support Needs
- Alternative and Augmentative Communication AAC
- AAC Assessment
- Learning activities/ Instructional strategies
- Assessment Methods
- Resources and additional materials

Learning Objectives / Outcomes

- Understand the communication process, the types of communication methods, and how different difficulties can impact it.
- Learn about alternative and augmentative communication systems and levels of technologies available.
- Understand and describe how to present language in Augmentative and Alternative communication options to convey a message.
- Understand the features of different AAC options and describe how to match the client's needs after a proper assessment.

Introduction to Communication

What is Communication?

Communication is a fundamental part of being human. Only humans have developed language and complex communication systems that work overtime and distance.

Communication is an essential key to social interaction and a crucial part of our relationships with other people.

Why do we communicate?

Communication is part of all our social, emotional, practical, and intellectual activities. Other than 'the basics' like eating and sleeping, it is hard to think of any human activity that does not involve some aspect of language and communication.

How do we communicate?

We all use multiple communication methods and are often divided into verbal and nonverbal forms. The communication method we choose usually depends on the situation.

- Verbal forms would include spoken speech and language.
- Nonverbal forms of communication would include gestures, facial expressions, intonation, written words and the use of symbols or images to convey meaning.
- Communicating with pictures, signs, and symbols (Using images to transmit information, Impact of multimedia, using picture symbols in everyday life, Signage, and conventions, Getting the message across, Understanding information).

Why is communication so important?

Communication allows a person to:

- Express needs, wants and feelings.
- Establish and maintain relationships.
- Ask and answer questions.
- Start, be part of and end conversations.
- Give information and direct others.
- Describe events and tell stories.
- Solve problems and learn new things.
- Function with greater independence.

Language is a tool/system comprising signs, symbols, and words that can change – dynamic. It uses verbal or non-verbal codes to transfer information, messages, or requests.

Communication is the process /way of transferring messages, requests and sharing information, thoughts, ideas, and emotions between two or more people who can be both verbal and non-verbal.

Communication Support Needs

Communication is a core human function and is vital in many areas of everyday life. Being unable to speak is a severe disability.

We all have the right to speak for ourselves and to have our voices heard, so it is essential to find ways around lack of speech using the various forms of communication aids available.

Communication is a two-way process, so if one partner has difficulties, then the other communication partners are also involved; that is why they are called 'Communication Support Needs', hoping that the other partner can give support.

Who has Communication Support needs?

Communication can be limited for many reasons, but usually, it is related to language comprehension, expressive speech, and language.

- There is no age or type of person.

- Some people find it hard to express themselves, unable to articulate words, structure sentences or process speech.
- A lack of understanding of what is being said by the person speaking to them and to follow longer instructions or explanations.
- Difficulty can range from mild to very severe.

What causes Communication Support Needs?

- Some people have difficulties from birth.
- Others acquire communication needs later in life through an accident or an illness.
- The exact communication needs can vary in the severity of their effect depending on the situation, the communication partners and the support or lack of support available.

What is the impact if we cannot communicate?

- Persons who cannot communicate experience a loss of control over their own lives. This impacts every aspect of life and is likely to affect mental health, behavior, and any opportunity to learn new skills through interacting with others.

Types of Communication Difficulties/Disorders:

A **communication disorder** is an impairment in receiving, sending, processing, and comprehending concepts or verbal, nonverbal and graphic symbol systems. A communication disorder may be evident in the processes of hearing, language, and/or speech. A communication disorder may range in severity from mild to profound. It may be developmental or acquired. Individuals may demonstrate one or any combination of communication disorders. A communication disorder may result in a primary disability, or it may be secondary to other disabilities.

- **A speech disorder** is an impairment of the articulation of speech sounds, fluency and/or voice.

    1. An **articulation disorder**.

    2. A **fluency disorder**.

3. A **voice disorder.**

- **Language disorder** is impaired comprehension and/or use of spoken, written and/or other symbol systems. The disorder may involve (1) the form of language (phonology, morphology, syntax), (2) the content of language (semantics), and/or (3) the function of language in communication (pragmatics) in any combination. Content of Language

- **Hearing disorder** results from impaired auditory sensitivity of the physiological auditory system. A hearing disorder may limit the development, comprehension, production, and/or maintenance of speech and/or language. Hearing disorders are classified according to difficulties in detection, recognition, discrimination, understanding, and perception of auditory information. Individuals with hearing impairment may be described as deaf or hard of hearing.

- **Central auditory processing disorders** are deficits in the information processing of audible signals not attributed to impaired peripheral hearing sensitivity or intellectual impairment. This information processing involves perceptual, cognitive, and linguistic functions that, with appropriate interaction, result in effective receptive communication of auditorily presented stimuli. Specifically, CAPD refers to limitations in the ongoing transmission, analysis, organization, transformation, elaboration, storage, retrieval, and use of the information in audible signals.

Rather than focusing negatively on a person's difficulties, the term 'Communication Support Needs" emphasizes the importance of support from others.

The communication support that is needed can be provided both directly and indirectly.

Direct support will be in the form of providing materials and communication tools for the person to use.

Indirect support will be in the form of understanding and helpful behavior from communication partners and, ideally, from society.

Alternative and Augmentative Communication AAC

People who cannot speak, or who cannot speak clearly enough to make themselves understood, need other ways of communicating to express their thoughts, feelings, needs and ideas and to transmit information or ask questions. This is where Augmentative and Alternative communication AAC comes in. It is a form of direct communication support that will help people to be included and to participate actively and independently in society and to overcome their problems.

What is Augmentative and Alternative Communication:
Augmentative and Alternative Communication (AAC) is used as an umbrella term to describe the many possible ways to support understanding and communication. It includes all forms of communication that improve or add to speech, language, and literacy skills. It ranges from simple non-verbal systems like gesturing and pointing to pictures that are too complex and powerful computer technology.

AAC involves supplementing or replacing natural speech and writing with:
- Aided symbols such as photos, picture communication symbols, line drawings, physical objects and letters and words.
- Unaided communication such as vocalizing, body language, facial expressions, pointing, sign language and fingerspelling.
- Speech output communication devices.
- Combining Communication Methods: In many cases, effective communication includes a combination of aided and unaided approaches and formal and informal ways to communicate.
- The use of symbols to communicate a need may be enhanced by recognizing other cues, such as facial expressions and sounds that communicate urgency.

Who uses AAC?

Persons with complex communication needs benefit from using AAC, including those with:

- An intellectual disability
- Severe physical disability such as Cerebral palsy
- Autism
- Traumatic Brain Injury and/or Aphasia
- Co-occurring disabilities have several difficulties impacting communication skills, such as a hearing or visual impairment alongside the disabilities already listed.
- Social behavior and other specific difficulties

Benefits of AAC:

The powerful effect that AAC can have on the lives of people who have no speech cannot be overstated.

It can give people who might otherwise be isolated and limited by their condition access to opportunities and the chance to live their lives fully.

AAC systems:

Low-tech communication systems do not need any power, but they need another person to be there to 'read back' and sometimes 'interpret' what is being pointed out.

- Alphabet board to point letter by letter to spell words.
- A word boards.
- Paper-based symbol communication chart
- PECS (picture exchange communication system)
- Symbol book
- Symbol Communication Software

Benefits:

- It can be built up from a few simple cards or pictures.
- Easy to use.
- Very quick and practical in use.
- Cheap to make.

- Highly portable and can be used anywhere.

High-tech communication systems are highly sophisticated and need a battery or primary power. They can be simple, like a one-button device that speaks out a single recorded message when played, or they can be powerful capable of storing and replaying many messages.
- Specialized talking computer, operated by special switches.
- Tobii Communication aids
- iPad with Communication apps like Proloquo2Go and Go Talk now
- Light Writer
- Prox talker...

Benefits:
- With a speech output device, the person can speak for themself and have their voice heard.
- The person is much more independent and does not always need a helper.
- The person can access many words, phrases and special functions and sometimes program their own device.
- Different functions can be carried out simultaneously, like email, phone texting, environment control, communication, etc....

Always remember that:
- All communication has a non-verbal element.
- Before formalizing communication, think about making sure the person makes regular use of non-verbal communication.
- Ensure there are consistent actions that mean something when having a conversation.
- Family and careers are essential -they often recognize slight indications of communication and understand what is wanted.

Before introducing a structured approach to communication, understand five valuable steps to a successful AAC.
- Observe: To see what a person can achieve, not what they find challenging. Are they watching you? And are you watching them?
- Interpret: To work out what will help. Can they understand the behavior?

- Imitate: Are they able to copy and respond?
- Modelling: You show them again and again what actions are needed
- Initiate: Then, in time, can the person independently use the action?

Language and Culture
- Our language and culture influence the interpretation of symbols.
- Using a process to choose symbols can help the child feel comfortable using them, such as deciding which symbol best represents a typical type of food.
- Always introduce new symbols that are an appropriate match for the child, setting and task in hand, allowing a sense of success when it has been chosen.
- Symbols, when created by local designers who understand the context, language, and social setting, can result in better outcomes.

Tawasol Symbols Project:
Aims of the Project
- To develop a **freely** available Arabic symbol dictionary suitable for use by individuals who have a wide range of communication difficulties because their needs are being met by the use of externally developed AAC symbol systems.
- To develop a set of symbols that are **culturally**, **linguistically,** and **environmentally** appropriate for AAC users in Qatar and the Arab world.
- TAWASOL Symbols dictionary is a bilingual Arabic / English symbol dictionary of frequently used words in spoken and written communication (Tawasol in Arabic) represented by images and pictograms.
- The symbols are provided with their text equivalents in Modern Standard Arabic and, where appropriate, colloquial Qatari Arabic plus their English translation with the aim to offer a free set of symbols that could complement other symbols already in use to support:
  - Alternative and Augmentative Communication (AAC) users
  - Those with low literacy levels, learning disabilities or specific learning difficulties, where symbols can aid reading and writing skills.

- Those individuals who have social interaction difficulties where symbols can act as prompts.
- Arabic as a second language and environments that require signs with words and explanatory graphics
- Symbols may also work similarly for those who acquire speech and language difficulties due to strokes and brain injury.

Accessing AAC:

Whatever communication method is used, the person must be able to access and operate it. As well as having difficulties with speaking, people may be unable to control their hands to point, type or use a mouse and will need a different access method.

- Pointing and clicking
- Eye pointing
- Eye gaze, head pointing.
- Switches
- Listening and choosing

AAC Assessment

Following an assessment framework allows teams to work together systematically to find the best solution for everyone. Assessment frameworks also help by providing access to resources such as forms that guide thinking, activities to try during assessment and ways of measuring success and progression:

SETT (Student Environment Task Tools) Framework

SETT is an abbreviation of **S**tudent, **E**nvironment **T**ask and **T**ool. Using the SETT framework helps to consider the child's needs and their environment.

Participation Model framework

This was developed by David Beukleman and Pat Mirenda in 1988 and was endorsed by the American Speech and Hearing Association (ASHA) in 2004. It

provides a strong, systematic approach to AAC assessments and intervention. It provides a diagram that includes the following steps:

- **Assessing opportunity barriers**– (policy, attitude, skills of team who support the child)
- **Assessing access barriers** – (current communication, potential to use AAC, potential to improve speech)
- **Plan and implement interventions for today and tomorrow** – (providing training to the child and the team)
- **Evaluate effectiveness** – (Is the person participating in their life using their AAC?)

To find an individualized language system, dynamic assessment should be used to achieve an interactive and comprehensive evaluation of skills and support an AAC system that will fit the needs of each user.

What is Dynamic Assessment?

ASHA defines dynamic assessment as a method of conducting a language assessment which seeks to identify the skills that an individual child possesses as well as their learning potential. A dynamic assessment should include active client and clinician/assessor participation, modification of assessments as needed, and being fluid and responsive. It is a highly interactive process that should adapt to the preferences and communicative needs of the client.

Additional Assessment Considerations/Measures:

- Determine the client's level of cognition, language, motor, and sensory skills
- Perform clinical observations across individuals, contexts, and settings relevant to the client.
- Gather interviews from the client, parents/caregivers, instructors, therapists, and/or related service professionals (e.g., PT, OT).
- Conduct activity and communication needs inventory
- Prepare to adapt and modify the course of assessment as needed!

Some assessment tools to be considered:

AAC Genie

This is an affordable app that can be used to assess various skills related to AAC, such as vocabulary knowledge, expressive symbol use, and word recognition. The Vision Skills subtest can also be used to help determine grid size.

The Communication Matrix

A free website tool that professionals and family members can use. It takes you through a series of questions that create a chart that indicates a child's current communication skills and challenges. It can also be used to monitor the progress the child makes.

Dynamic AAC Goals Grid (DAAG-3)

Brought to you by Tobii DynaVox, it is another free resource that highlights a variety of linguistic components, which can be used when determining different AAC skill areas to develop goals for. It can be used to track progress over time.

Functional Communication Profile

This profile contains a variety of subtests that an assessor/clinician can complete to reflect a variety of language domains, including non-oral forms of communication and AAC. It provides a comprehensive inventory of an individual's communication abilities and degree of independence.

MOSAIC

MOSAIC stands for A Model of Observational Screening for the Analysis of Interaction and Communication. It is an active, downloadable form divided into 5 parts: the Conversation Form, Partner Interaction Form, Capability Form, Environment Observation Form, and Behavior Observation Form. MOSAIC Online is currently free.

1. **How to Make Communication Work**

Augmentative and Alternative Communication systems are assistive technology, and it takes time for a person to learn how a communication aid works and what they can do with it.

Sometimes, a person might find it hard and take longer to learn how to use technology effectively in different types of social situations and conversations.

The person using AAC will benefit if barriers are removed, and conversation partners are supportive.

Support from the communication partner.

In any conversation, there are at least two communication partners. The best way to support someone using AAC is to learn to be a good communication partner. Apply the 3 Golden Rules:

Rule 1: Focus on the person who is using an AAC system and not on their companion/support worker and not on their communication aid

Rule 2: Be open and do not make assumptions about the person who uses AAC. Everyone has different abilities and needs, and listeners must be flexible.

Talk normally, clearly, and directly, but do not exaggerate and there is no need to talk loudly and very slowly. Expect a reply and wait for it.

The Chatter Charter

Check – communication difficulties are not always apparent at first.

Help – ask how you can help; everyone's communication support needs are different. Ask – ask the person how best you can help.

Ask them to show you how they say 'Yes' and 'No'. Ask only one question at a time.

Time – be patient, take plenty of time, and stay quiet at times – communication can be slow. Silence is OK.

Tell the person honestly if you have not understood, do not pretend. You can ask the person to repeat or try to say things another way.

Extra clues – look at the person's eyes, face, body language or gestures for more clues; these can tell you a lot.

Recap – repeat back what you have understood and give the person a chance to pick up and 'repair' any mistakes or misunderstandings. Make sure you've both understood and agreed about what has been communicated.

Inclusive Communication:

Raising Awareness

Communities are aware of some disabilities, such as physical disabilities and sensory impairments. Still, unfortunately, other disabilities, such as communication difficulties and learning difficulties, are much less well-recognized and understood.

People and service providers in the community generally want to help if they can. Still, one of the most significant barriers is a lack of knowledge and experience of communication support needs and, in particular, the augmentative and Alternative Communication devices.

So, it is so important to provide a lot of information about AAC, including research, videos, publications and information about events and conferences.

We want society to be accessible and fully inclusive. That means that everybody, including people with communication difficulties, can be independent within their community and be included and participate in community life.

Involving people with AAC

Make sure that the person using the AAC devices is consulted regularly about any matters that concern them.

No decisions in healthcare, social services, education, or work... should ever be made without fully involving and consulting the person concerned.

Sometimes, services forget about the person's rights or under-evaluate the person's capacity to understand the situation and to express their views. Services may lack knowledge of how to present information and questions accessibly, how to wait for the response or how to engage in discussion with the person using AAC devices.

But even if a person's communication is limited, there are still ways in which he or she will be able to make their choices and give their point of view.

Learning activities/ Instructional strategies

- Cases
- Guest speakers
- Readings
- Lecture
- Interactive discussion
- Discussion Board
- Presentations

Assessment Methods

- Reflective Journal
- application cards
- online polling
- dynamic questions

Resources and additional materials

- [Tawasol Symbols - Welcome (mada.org.qa)](#)
- [Definitions of Communication Disorders and Variations (asha.org)](#)
- [Global Symbols](#)
- https://enableirelandat.ie/
- https://praacticalaac.org/praactical/
- [Keep-Talking-sheet.pdf (aacscotland.org.uk)](#)
- [Parents' and Teachers' Guide to Getting Started with AAC - Speech And Language Kids](#)
- https://www.aacscotland.org.uk/
- www.communicationmatrix.org