Module 3. Specific Programs of Support and Intervention

IPA+
Autism-training for inclusion
Index

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1. Intervention in Challenging Behaviour

‘Challenging Behaviour can be described as challenging when it is of such an intensity, frequency, or duration as to threaten the quality of life and/or the physical safety of the individual or others and it is likely to lead to responses that are restrictive, aversive or result in exclusion.’ Emerson (1995)

Since these behaviours can serve the person with autism to get attention from others, avoid unpleasant situations or access specific things when they have difficulties to express their feelings and desires, it is important to understand the specific purpose each challenging behaviour. Knowing the nature of the problem will be decisive to plan the intervention, proposing the most appropriate objectives and procedures.
Positive Behavioral Support

Positive Behavior Support (PBS) is a set of educational research-based strategies used to increase quality of life and decrease Challenging Behaviours by teaching new skills and making changes in a person's environment.

• It is based on functional evaluation.
• It has multiple interventions.
• It tries to teach alternative skills and to adapt the environment.
• It reflects the person’s value, respects their dignity, and preferences, and tries to improve their lifestyle.
• It is designed to be applied in daily life contexts using the available resources.
• It is based on a shared vision of the problem.
1. Establish the support team
2. Establish principles and values
3. Functional Behavioural Assessment
4. Development of the Positive Behavioural Support Plan
5. Monitoring and assessment of the Plan
Positive Behavioral Support: Establishment of the Support Team

• This team is formed by the professionals and family members who share and evaluate information about the problematic behaviors that the person manifests, as well as the circumstances that surround it, in order to develop effective, preventive and personalized supports.

• All of them contribute to the process:
  • Identification and classification of problematic behaviors
  • Prioritization and description of problematic behaviors.
  • Collect information on problematic behaviors in different contexts (previous interventions ...).
  • Use of registers to identify and classify behaviors according to their duration, frequency and intensity.
  • Commitment to collaboration and coordination: Share resources and information
  • Respect the consensus
  • Accept mutual collaboration Respect values
Positive Behavioral Support: Establishment of Principles and Values

Once the positive behavioral support team is formed it is important:

- To promote understanding and characteristics of P.B.S
- To get an agreement regarding the working program: timing of meetings:
  - 1 meeting before the first month.
  - 1 meeting fortnightly during the first three months.
  - 1 monthly meeting from the third to the sixth month.
  - From the sixth month scheduled general meetings
Positive Behavioral Support: Functional Behavioural Assessment

Is a technique to understand these behaviors through the analysis of different aspects related to the specific challenging behaviour, such as antecedents, consequences, situation, moment and place in which it appears. This analysis is a very useful tool to figure out the purpose of the conduct and the most appropriate objectives and procedures to follow in the intervention.

In this phase is important:

• To establish an initial intervention strategy in crisis situations: discuss strengths and weaknesses of the actions based on the original hypothesis of the problem behavior.

• To use registration and observation systems: description of behaviors, identify background, establish functional hypotheses, prepare summaries and perform verifications (functional analysis)

• The information is collected in different contexts and is provided by professionals and family.
Positive behavioral support: Functional Behavioural Assessment

To analyse the challenging behaviour, it is necessary to use an observation form which includes antecedents, description and consequences of each crisis. This tool allows to implement the following steps during the Functional Assessment:

1. **Description**: throughout systematic observation of the behaviour and interviews with family and caregivers, it is possible to obtain a good analysis of the behavior by gathering information about:
   - The specific nature of the problem: what is its purpose?
   - The social context and general context: is the environment uncomfortable (overwhelming stimuli, unpredictable activities)?
   - The reaction to the problematic behavior that causes in others: is there positive reinforcement after the behaviour?

2. **Categorization**: the professionals propose then an explanation about the behaviour paying attention to the social reaction that follows it. The interpersonal context is the key in this step.

3. **Verification**: This step implies a systematic change in the environment and/or social reaction to the problematic behavior, that is, the physical and social context. This step will take up to 4 sessions as minimum. Two of them are to provide the wished consequence to the problematic behavior. The other two are to provide the wished consequence to the adequate behavior.
### Functional Behavior Assessment Observation Form

<table>
<thead>
<tr>
<th>Event #</th>
<th>Date</th>
<th>Time Intervals</th>
<th>Target Behaviors</th>
<th>Setting Event</th>
<th>Antecedent</th>
<th>Actual Consequence</th>
<th>Perceived Function</th>
<th>Patterns Observed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
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<td>5</td>
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</tbody>
</table>

**Notes:**
- Behaviors occur most often between 9 to 10 am (main activity), 11 to 12 pm (lunch), 1-2 pm (free time)
- Non-applying will seem to be a mixing event for putting head on table
- The function of putting head on table, using inappropriate words seems to be to obtain attention
- The function of putting head on table, returning to participation, and talking points seems to be to escape a request
Positive behavioral support: Development of the Positive Behaviour Plan

- The plan is designed by all team members.
- The complexity of problematic behaviors involves complex solutions and, often, the combination of several strategies.
- It is important to distinguish between “control of a crisis” and “educational intervention”.
- The best time to start an educational intervention in problematic behaviors is when they do not take place.

<table>
<thead>
<tr>
<th>Control of a crisis</th>
<th>Educational intervention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose: to control or interrupt a situation which could be dangerous.</td>
<td>Purpose: to teach new skills that make unnecessary the problematic behaviors.</td>
</tr>
<tr>
<td>Its function is fast and it is temporary.</td>
<td>It takes a minimum of 4 sessions.</td>
</tr>
</tbody>
</table>
Positive behavioral support: Development of the Positive Behaviour Plan

• Elaboration of the hypothesis which explains the challenging behaviour and the characteristics of the context.

• According to the previous Functional Assessment we evaluate:
  • Antecedents and consequents
  • Functionality
  • Efficiency

• Taking into account the process: antecedents - behaviour - consequences, strategies will be proposed for each moment

• The elaboration of the plan implies:
  • preventive actions.
  • develop intervention strategies (before, during and after the behavior).
  • plan intervention in crisis.
  • systems and definition of supports.
  • establish responsible for follow-up.
  • the simultaneous application of different support strategies
### Modelo de Whitaker y cols (2001)

<table>
<thead>
<tr>
<th>FASES</th>
<th>ESTRATEGIAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desencadenante</td>
<td>Eliminación de la causa</td>
</tr>
<tr>
<td></td>
<td>Tratar la conducta como una forma de comunicación</td>
</tr>
<tr>
<td></td>
<td>Desviar su atención</td>
</tr>
<tr>
<td></td>
<td>Aprender a hacer frente al estrés</td>
</tr>
<tr>
<td>Intensificación</td>
<td>Recordar las recompensas</td>
</tr>
<tr>
<td></td>
<td>Recordar las reglas</td>
</tr>
<tr>
<td></td>
<td>Forma de evitación 1: proporcionar oportunidades para relajar la situación</td>
</tr>
<tr>
<td></td>
<td>Forma de evitación 2: cambio de orientación</td>
</tr>
<tr>
<td></td>
<td>Modificar la demanda</td>
</tr>
<tr>
<td></td>
<td>Tranquilizar la situación</td>
</tr>
<tr>
<td>Explosión</td>
<td>Despejar la zona 1: despejar el entorno</td>
</tr>
<tr>
<td></td>
<td>Despejar la zona 2: proteger al resto de personas</td>
</tr>
<tr>
<td></td>
<td>Dar una respuesta de baja intensidad</td>
</tr>
<tr>
<td></td>
<td>Intervención física</td>
</tr>
<tr>
<td>Recuperación</td>
<td>Proporcionar espacio</td>
</tr>
<tr>
<td></td>
<td>Regresar a la normalidad</td>
</tr>
<tr>
<td></td>
<td>Realizar de nuevo la demanda</td>
</tr>
<tr>
<td></td>
<td>Charlar sobre la situación</td>
</tr>
<tr>
<td></td>
<td>Cuidar de uno mismo</td>
</tr>
</tbody>
</table>

Positive behavioral support: Monitoring the Positive Behaviour Plan

The Positive Behaviour Support Plan must:

- Be continuous in time
- Allow the generalization of learning to different contexts and situations

The Positive Behaviour Support Plan is effective when significant changes are achieved for the person, their family and the usual contexts. This requires:

- Increasing alternative behaviours and adaptative skills
- Reducing frequency, intensity and duration of challenging ones
- Improving the quality of life of the user, their family and professionals
- Introducing changes in the plan if necessary
Positive behavioral support - Intervention

The important aspects of the intervention are:

• A positive relationship with the person with autism. This includes the elaboration of a list of reinforces that are delivered freely. Every attempt of communication by the person with autism will be attended.
• To choose forms of communication that have the same purpose as the problematic behavior.
• To choose forms of communication that are more efficient than the problematic behavior. It is important to reduce the reactions to the problematic behavior.
• To choose an appropriate way of communication based on each person. The ideal form of communication is the one that the person is already adapted to.
• To improve the comprehensive language.
• To evaluate the intervention through the level of satisfaction of the persons that have taken the intervention.
ABA – Applied Behavior Analysis

Applied behaviour analysis (ABA), is the use of these mentioned techniques and principles to achieve a meaningful and positive change in behavior. Behavior analysis is a scientifically validated approach to understanding behavior and how it is affected by the environment. In this context, “behaviour” refers to actions and skills and "environment" includes any influence – physical or social – that might change or be changed by one's behavior.

Disruptive and impulsive behaviour tend to be self-reinforcing in most social contexts as they provoke an immediate social or physical reaction. These can be managed using techniques designed to limit the this reinforcement and to alternatively reinforce more adaptative strategies for communicating and attracting attention.
### Behaviour Control Techniques

Some strategies to use for an effective intervention when a person with autism gets into a challenging behaviour are:

<table>
<thead>
<tr>
<th>Teach communication</th>
<th>• Provide them with tools to communicate their needs, either through spoken language, sign language, or picture communication systems designed for people with special needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teach alternative behaviours</td>
<td>• Besides AAC systems, also give them an alternative behaviour (e.g. pointing at something). You may also need to figure out how to make certain tasks easier for the child.</td>
</tr>
<tr>
<td>Reinforce good behavior</td>
<td>• Whenever they use appropriate behavior to get his needs met, such as asking for something, praise them for it! Initially, give them what they ask for (within reason!) as often as you can in order to reinforce appropriate asking.</td>
</tr>
<tr>
<td>Change your behavior</td>
<td>• Many people with autism will engage in certain behaviors because of the reaction they get out of people, so your reaction may be reinforcing the behaviour. Allowing to get out of a non-preferred task as a consequence of challenging behaviour can also reinforce it. In general, these behaviours should be met with firm, yet calm redirection.</td>
</tr>
<tr>
<td>Prevention</td>
<td>• The warning signs that a challenging behaviour is about to occur should be learned. When you see a “precursor” behavior is the time to act, before the person loses control. Also, if a certain task usually results in a meltdown, rethink whether or not that task is truly necessary.</td>
</tr>
</tbody>
</table>
2. Intervention in the Emotional-Sexual Sphere

Healthy sexual development is an important achievement for individuals with and without autism. People with ASD have been found to display an interest in sexual interactions and to engage in sexual behaviors yet they may lack developmentally appropriate education in sexuality, sexual health, and healthy relationships.

While the relationship between poor sexual knowledge and unsafe sexual practices and sexual victimization is well known, researchers have found that individuals with ASD have lower levels of sexual knowledge, thus people with autism is, in general, a high risk group.

Sexuality is a central aspect of the human being that is present throughout his life, evolving over the stages of the vital cycle that includes different dimensions: biological gender, gender identity, sexual orientation, couple relationships, eroticism and sexual intercourse, intimacy, reproduction...

Sexuality results from the interaction of factors of different nature: biological, psychological, social, economic, cultural, ethical, legal, historical, religious and spiritual, etc and It is experienced throughout thoughts, fantasies, desires, beliefs, attitudes, values, behaviours, practices, roles and relationships.

Sexual health is a state of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relations, as well as the possibility of having pleasurable and safe sexual experiences, free from coercion, discrimination and violence.
### Sexuality and autism

#### Myths and false beliefs

<table>
<thead>
<tr>
<th>Myth</th>
<th>Evidenced Facts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. They are asexual persons, without appetite, desire or excitement.</td>
<td>1. There is a great diversity from one individual to another and there can be people with an intense sex life</td>
</tr>
<tr>
<td>2. They are like children.</td>
<td>2. It changes in each vital stage with the opportunities and difficulties that derive from them</td>
</tr>
<tr>
<td>3. They are innocent and their sexuality should not be aroused</td>
<td>3. Sexuality wakes up naturally, just like in neurotypical people.</td>
</tr>
<tr>
<td>4. They do not need to experience it because of their dissability</td>
<td>4. It is an autistic people’s right to enjoy their sexuality satisfactorily.</td>
</tr>
<tr>
<td>5. They cannot have a partner, children, family ...</td>
<td>5. Many people with autism can have a partner and even form a family.</td>
</tr>
<tr>
<td>6. They have too much sexual motivation.</td>
<td>6. Some people with autism can develop inappropriate routines, obsessions or behaviors around sexuality.</td>
</tr>
<tr>
<td>7. It is not worth investing time in sex education</td>
<td>7. Intervention in sexuality with people with ASD is a protective factor and the best way to avoid risks.</td>
</tr>
<tr>
<td>8. They do not suffer abuse</td>
<td>8. People with autism are a very vulnerable group and all prevention is necessary.</td>
</tr>
</tbody>
</table>
What to consider about sexuality in ASD

- Lack of awareness of social rules around sexuality
- Do not differentiate between places and public and private environments
- Difficulty to tell the difference between appropriate or inappropriate comments
- They might feel guilty and shame experiencing their sexuality, pleasure...

- Ingenuity, difficulty to identify deception or abuse.
- Difficulty to inhibit spontaneous behaviors
- Difficulty in emotional self-regulation
Prevention as the main goal in the intervention in sexuality ASD

- Development of skills to detect situations of abuse, as well as prevent them from engaging in abusive behavior.
- Prevent inappropriate or risky behaviors for health and social relationships.
- Prioritize places and intimate moments in individual plans.
- Involve families in the process of sexual affective education in a coordinated way with other educational agents.
- Develop common professional action guidelines, identifying good practices associated with affective and sexual development.
- Teaching appropriate behaviors from the childhood.
### Strategies to develop a healthy sexuality

- **Answer accurately and correctly when they ask, without avoiding answers or hiding.**

- **Respond naturally as if it were any other question. Avoid mystery, guilt or joking.**

- **Adequate language to the age and characteristics of the person: start using casual vocabulary and introduce technical terms gradually.**

- **Adapt the answers and information to the knowledge and capacity of the person. Give a positive view of sexuality**

- **Encourage people with ASD to have a realistic view of their sexuality: possibility of having a partner or family, having sex with other people ...**

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### Topics to be addressed in each stage of life cycle

<table>
<thead>
<tr>
<th>Childhood (from 0 to 12 years old)</th>
<th>Adolescence (from 12 to 18 years old)</th>
<th>Adults (from 18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Differences between intimate and private and public</td>
<td>• Physical, psychological and social changes</td>
<td>• Great diversity</td>
</tr>
<tr>
<td>• Protect them from abuse: difference between good secrets and bad secrets or good touch (hands, forehead) and bad touch (underwear)</td>
<td>• Explain and train to deal with menstruation successfully in girls and erection in boys</td>
<td>• Sexual misconduct can lead to legal problems</td>
</tr>
<tr>
<td>• Meaning of friendship, couple, man, woman ...</td>
<td>• How to say &quot;no&quot;</td>
<td>• Couple relationships and/or care of their children.</td>
</tr>
<tr>
<td>• Explain gender and gender differences</td>
<td>• Concepts like passion, pleasure, excitement or consent must be explained</td>
<td>• Diversity of sexual interests and practices</td>
</tr>
<tr>
<td>• Monitor masturbation, very common in young children, as they can do it in inappropriate places.</td>
<td>• Analyze inappropriate and appropriate behavior when meeting someone they like: approach, communication, dating...</td>
<td>• Satisfaction with your own sexuality</td>
</tr>
<tr>
<td>• Caring for self-esteem</td>
<td>• Discuss the risks of sexual intercourse</td>
<td>• Appropriate and inappropriate behavior, respect and consent</td>
</tr>
<tr>
<td></td>
<td>• Proper use of social networks and ICTs</td>
<td>• Proper use of social networks and ICTs</td>
</tr>
<tr>
<td></td>
<td>• Development of self-identity and moral values</td>
<td></td>
</tr>
</tbody>
</table>
## What to teach to promote skills

### EXPLAINING SOCIAL RULES ABOUT SEXUALITY
- Definition of concepts such as friendship, love, sexual identity, sexual orientation, friendzone…
- Suitable/inappropriate contexts (places, moments, persons) to talk about it
- What behaviours are socially wrong: e.g. Staring at a person of the opposite sex
- Cultural examples of their interest (movies, books) and videomodeling are useful resources

### MODELLING
- Professionals and families share long time with the children and their example is an important way in which they learn.
- It is important to be aware the way we treat them because is what they learn is right
- Take into account their difficulty to generalize: if professionals and family kiss them usually, they might see normal that unknown adults do it to them or if they like to stroke a professional’s leg when working, they might do it in different contexts too
- They must be treated according to their age, not as if they were always children.

### ASSERTIVENESS
- Assertiveness includes the expression of our desires, emotions and thoughts in a respectful way
- Teach them to say "no" and respect the decisions of people with ASD as long as they are safe, healthy and appropriate will help prevent abuse and intimidation.
- Teach them to accept a negative answer from their partners and develop skills to deal with frustration. It will prevent them from committing abuses.

### SCRIPTS AND SOCIAL STORIES
- Short scripts or lists including steps to know what to say, how to have a date, etc
- Teach them strategies to maintain successful social interactions
- If they know how to do it the right way it is more likely they are successful, improving their confidence and quality of life, and avoiding problems.

### PRIVATE AND PUBLIC PLACES
- They might find difficult to understand when, where and how they can engage in sexual practices.
- Which can lead them to social problems and even legal issues unintentionally (exhibitionism, perversion)
- It is important to help them understand where and when is masturbation or sexual intercourse appropriate and inappropriate
- Private places where it is right: our room, the bathroom, when they are alone.
- Public places: this is wrong under any circumstances: the living room at a family meal, the park, at work.

### SEXUAL ABUSE PREVENTION
- They are a high risk vulnerable group with higher rates of sexual abuse victimization than the average population
- We must provide them with efficient tools from the childhood
- Self-protection
- To know when they are being tricked
- How to ask for help
- How to say no

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Autism training for inclusion

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3. Health and nutrition

- Sleep and feeding problems are common among people with autism.
- Eating disorders in autism appear with various manifestations but food hypersensitivity can be a frequent factor and it is possible that some people with autism have sensory alterations especially marked in the first years of development what can lead them to refuse different types of food because of their smell, feel, color or texture, showing preferences for some types of food.

### POSSIBLE CAUSES OF EATING DISORDERS IN PEOPLE WITH AUTISM

| Health issues: intolerances, allergies, medication… Sensory disturbances, allergies, |
| Sensory issues: hyper selectivity to certain food items eating only certain colours, textures, smells. |
| Gastrointestinal problems |
| Negative classical conditioning |

### FEEDING BARRIERS

- Alteration in the rhythm of the food
- Rejection to solid food items
- Limited food items list
- Rituals
- Pica Behavior
Health Issues: intolerances, allergies and gastrointestinal problems

• It is important to assess the possible intolerances and allergies that can cause discomfort and pain. However, discomfort and pain can be caused by their rejection to food items, their stools should be controlled to make sure that they do not suffer from intolerance.

• Autism has been associated with metabolic and gastrointestinal problems. However, there are not studies showing the prevalence of these symptoms.

• It is assumed that some people with autism have constipation due to their feeding restrictions, intolerance to certain foods and/or the presence of inflammatory processes, not chewing the medication correctly, and a sensory problem in the bathroom environment, but it is not due to autism.

• A limited food choice with the rejection and limitation of certain food items may lead to common gastrointestinal dysfunctions and a deficient nutrition.
Sensory Issues

People with autism can have sensitivity to various food items. This can be due to different factors such as:

- **Hearing**: Intense, sharp or continuous noises can cause some discomfort. Some of the food items that can cause these sensations are crackers. The crackling sound can cause extreme situations of discomfort.

- **Touch**: The different textures that food items can have is extremely important for people with autism. Texture of food items in the mouth or in the hands can cause their rejection to certain food items.

- **Taste**: Some food items have odd flavors that can cause discomfort making them reject more food items that are similar to the one they dislike in taste.

- **Sight**: The form in which the food items are presented can also cause discomfort. Color and shape play an important role. For example, a person with autism can have certain discomfort to the color orange in food items, therefore that person will reject all food items that are orange.

- **Smell**: Some people with autism can detect certain smells that cannot be noticed easily by other people. These smells can cause rejection to the food item.
Nutrition and Health – Negative Classical Conditioning

• This is the connection between a new stimuli and a already existing reflection. This happens from experience.

• An example of this is when a person with autism gets a stomachache or vomiting after eating. This experience creates a negative reinforcement making that experience extend to similar food items. This creates a rejection to those food items.

• In the same way, when parents try to feed these children create a negative experience because they end up arguing and forcing the child to eat, this creates a negative reinforcement for the children and therefore they reject food items in the future.
## Feeding barriers

<table>
<thead>
<tr>
<th>Alteration of the rhythm</th>
<th>Solid food</th>
<th>Restricted diet</th>
<th>Rituals</th>
<th>Pica behaviours</th>
</tr>
</thead>
<tbody>
<tr>
<td>• No feeling of satiety, therefore, they eat compulsively, very fast and they snack between meals. The chewing process is not completed properly causing bad digestion, stomachache and the risk of obesity. • Not motivated to eat therefore meals are slow and long creating tension among family members.</td>
<td>• Some refuse to eat solid food items unless they are smashed and made into soup. • The change to eating solid food items requires muscle tone in the mouth and face and the proper control of their jaw.</td>
<td>• Sensory issues can result into a restricted diet • E.g. They might only want to eat yellow food items or limit their diet to only processed food, which can increase their risk in obesity or health problems due to poor nutrition</td>
<td>• Some people can develop rituals when eating. These rituals can become a sequence of the meal. • This type of sequence can cause tension and discomfort both for family members and the person wit autism</td>
<td>• It is the tendency to eat things that are not food. • This behavior can cause damage in different ways: the materials can be toxic or they can cause an allergic reaction or even can prove deadly as a result of choking, poisoning, infection or gastrointestinal perforation. Other related health risks include broken teeth and other dental problems, constipation or bowel obstruction</td>
</tr>
</tbody>
</table>
Knowing the possible causes that can cause a feeding problem gives the necessary knowledge to implement an intervention. It is very important to know current health problems and possible side effects in case they are taking medication.

A feeding intervention should start with someone that is not a family member. This breaks the conditioning that the person with autism had before during the meals like norms and routines.
Nutrition and Health – Guidelines and strategies

• **Good relationship with the person with autism:** this is important before starting intervention. In the beginning of the intervention, meals can be a tense moment because if the person needs to be strict with the norms; however, the person needs to know there is also fun times. It is crucial to be firm but gentle with the norms and the communication with the person with autism must be clear.

• **“New place, new norms”. Calm environment:** The conditioning of the meals routine must be broken, so having meals in a different environment can help creating a calm environment to place new norms.

• **Prioritize objectives. The adult decides “what, when and how”:** Establishing a well organized list of objectives is part of the criterion for feeding intervention. This can involve decision about what to eat, how much, when and how, for example establishing schedules and quantity of food. However, it is important to let the person with autism make some decisions, since this is a powerful quality of life indicator, respecting their preferences and appetites if they fit into a healthy diet.
• **The location at the table:** During feeding intervention is important to have a calm environment, but it is also important to be seated in front of the person with autism. Being in front of the person with autism gives the control over the adult easily; also, the food is controlled easier.

• **Choose one meal of the day:** Feeding intervention can become a tense moment, so it is important that only one meal is chosen to work on the chosen food item. It is possible that the person with autism eats less food during that meal, it is important that the other meals have food items that the person likes so that they eat properly. Snacking can become a problem since the person with autism is probably hungry, moreover we need to control the person with autism so that they do not snack.

• **Law of the empty plate:** An empty plate means that the meal is over, therefore we will use that as visual aid. In the beginning of the intervention, small amount of food is put on the plate. A lot of food on the plate can cause the person with autism to become overwhelmed. We need to be careful with this law. Once the person with autism eats a good variety of food items, they need to learn that if they are not hungry they do not have to eat everything until the plate is empty.
Nutrition and Health – Myths

Casein- and Gluten-Free Diets:

• It is believed that eliminating casein and gluten from the meals of people with autism, they will have less symptoms of autism. However, studies show there is not such correlation;
• It is important to speak to the family about the dangers of this sorts of non-evidenced therapies that may lead to a deficient nutrition and health problems.
Sleep

People with autism often have sleep disorders (prevalence 40-80%). The most common sleep problem is difficulty sleeping, repeated awakenings during the night and early morning waking.

Apart from some medications that must be prescribed by the doctor when required, establishing a good sleep routine helps to maintain a better sleep hygiene.
**Nutrition and Health – Sleep**

**Sleep environment**
The bedroom should be dark and quiet since people with autism are sensitive to noises and lights, those should be avoided.

**Bed time routine**
This routine should not last more than 20-30 minutes. Relaxing activities such as reading or listening to music should be included. Meals, caffeine, electronics should be avoided.

**Sleep/wake schedule**
The schedule of waking up and going to bed should be similar from weekdays to weekends.

**Fall asleep alone**
The person with autism needs to learn to fall asleep alone so when they awake during the night, so that they can fall back asleep by themselves. A parent present can create a routine of having to be present every time they wake up.

**Exercise**
Exercise during the daytime makes sleeping easier as they are more tired. However, exercise close to bedtime is not recommended.

**Naps**
Naps are helpful for preschool children. Thus, naps should not be taken in the afternoon; thus, the naps should not be long.
**Intervention in sleep**

- **Keep a sleep diary**
  - It can help to establish any unusual patterns of sleep
  - It can act as a visual reminder of their sleep patterns

- **Establish a routine**
  - It can help to make them feel safe and in control
  - It can be used everyday and everywhere

- **Use relaxation techniques such as**
  - Adding a few drops of lavender oil to the bath
  - Gentle hand or scalp massage
  - An hour’s quiet before bedtime, or music

- **Make sleep more comfortable**
  - Block out light and reduce noise and smells
  - Use a weighted blanket
  - Remove distractions such as toys

- **Medication**
  - Melatonin supplements

---

4. Personal autonomy

Personal autonomy is a very important indicator of quality of life and that is why promoting the skills involved to achieve it is crucial. The balance between providing appropriate supports and promoting independence allows children and adults to pursue vocations, leisure activities, and social relationships that capitalize on their strengths, interests and preferences have a positive influence on happiness and quality of life.

- **The Activities of Daily Living Model**, first proposed in 1950 by Sidney Katz provides a good guide to promote all the required skills for personal autonomy since ADLs are used as a measurement of person’s functional status.

- The concept of ‘dependency’ derived from the ADL model in the early 1990s and it has provided an international framework for evaluation and care to frail population across the lifespan. In 1998, the European Council made a recommendation to EU member states to develop care for dependent population (persons with disability and need of support from a third person) based on the ADL approach.

- It defined ‘dependency’ as a condition related to the loss of autonomy and the need of support by a third person related to an impairment of activities of daily living, specially self-care, linking ‘autonomy’ and ‘dependency’ to a single construct.
Activities of Daily Living

ADLs consist of Basic ADLs and Instrumental ADLs. Basics ADLs are more essential for survival than Instrumental ADLs (IADLs), which are not necessary for fundamental functioning, but they let an individual live independently in a community.

<table>
<thead>
<tr>
<th>Basic ADLs</th>
<th>Instrumental ADLs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Personal hygiene: Bathing, grooming, oral, nail and hair care</td>
<td>• Companionship and mental support: It reflects on the help that may be needed to keep a person in a positive frame of mind</td>
</tr>
<tr>
<td>• Continence management</td>
<td>• Transportation and shopping: How much a person can go around or procure their grocery and pharmacy needs without help</td>
</tr>
<tr>
<td>• Dressing: A person’s ability to select and wear the proper clothes for different occasions</td>
<td>• Preparing meals: Planning and preparing the various aspects of meals, including shopping and storing groceries</td>
</tr>
<tr>
<td>• Feeding: Whether a person can feed themselves or needs assistance</td>
<td>• Managing a person’s household: Cleaning, tidying up, removing trash and clutter, and doing laundry and folding clothes</td>
</tr>
<tr>
<td>• Ambulating: The extent of a person’s ability to change from one position to the other and to walk independent</td>
<td>• Managing medications: How much help may be needed in getting prescriptions filled, keeping medications up to date and taking meds on time and in the right dosages</td>
</tr>
<tr>
<td></td>
<td>• Communicating with others: Managing the household’s phones and mail and generally making the home hospitable and welcoming for visitors</td>
</tr>
<tr>
<td></td>
<td>• Managing finances: How much assistance a person may need in managing bank balances and checkbooks and paying bills on time</td>
</tr>
</tbody>
</table>
Activities of Daily Living in autism

Assessment tools for the independence level, like the Barthel ADL Index, are very useful to evaluate difficulties related to physical and intellectual disabilities. However, people with High Functioning Autism might struggle with daily activities due to propositional aspects based on specific characteristics:

• **Lack of Theory of Mind:** they are more vulnerable to mate crime or people taking advantage of them
• **Executive functions:**
  • Difficulty to generalize learnings: they can learn to solve a specific problem but daily life offers very different situations, for example they can be able to prepare dinner at home but not in a different kitchen if they travel
  • Mental rigidity: difficulty to react to unexpected events, modify their plans or making decisions: for example if they go to the grocery shop and they find it closed they might struggle generating alternative solutions
  • Anticipate consequences: they might not perceive a dangerous situation
  • Managing time: for example they might be able to have a shower and dress without any physical help but it takes 3 hours to do it properly

In the intervention to promote personal autonomy, it is important to take into account all these aspects and teach the person strategies that allow them to put into practice the skills acquired in a functional way.
Dignity

From a rights-based approach, respect and dignity must be guaranteed and promoting their personal autonomy will be a priority.

People with Autism…

- are full citizens.
- must participate in the life of their community.
- can improve their quality of life with adequate supports.
- can develop their skills and abilities.
- need comprehensive and specialized attention in all stages and areas of their lives.
5. Organization of spaces and times

• Cognitive style in the spectrum makes the world unpredictable for many people with autism:
  • They tend to focus on details
  • Mental rigidity to deal with changes and unexpected events
  • Lack of theory of mind
  • Difficulties in the communication

• This unpredictability can lead to stress, anxiety and challenging behaviours. Organization of time and space can prevent these problems and promote meaningful engagement in activities, flexibility, independence, self-efficacy and personal autonomy.

• This organization is mainly addressed throught the TEACCH Model strategies but also integrating other evidenced-based practices
TEACCH Model

- Developed in North Carolina in 1966 by Eric Schopler is based on the learning characteristics of individuals with autism, including strengths in visual information processing, and difficulties with social communication, attention, and executive function.

- The Teacch Model is an intervention approach based on structured teaching that includes:
  - External organizational supports to address challenges with attention and executive function
  - Visual and/or written information to supplement verbal communication
  - Structured support for social communication

- Structured TEACCHing is not a curriculum, but instead is a framework to support achievement of educational and therapeutic goals. This framework includes:
  - Physical organization
  - Individualized schedules
  - Work (Activity) systems
  - Visual structure of materials in tasks and activities
Teacch: Physical Structure

- It refers to the environment in general and it means to organize the purpose of space including the way the furniture is placed and the materials classified to add meaning and content to the surroundings.
- It must never be a restricted method, it is just an instruments to teach, not an objective itself.

- The professional must structure their position too:

  **In front of the student:** Teaching style. This position makes the teaching interactive and offers a good vision.

  **Next to the student:** useful for working on materials and instructions. It helps to have visual aids and language. It works on skills.

  **Behind the student:** gives them independence. This position is aimed at monitoring, more than teaching.
Physical structure: Sensory distractions

In order to prevent distractions is important to minimize sensory input avoiding:

- High frequency sounds: electronic devices like TV can emit pitching sounds that most people cannot hear even when muted or turned off
- Lighting flicker, including the computer screen or LED lamps
- Strong smells: for example, deodorants, perfumes, air freshener, food smell
- Annoying noises like chalk, lawn mowing, drill
- Ordinary noises: even traffic or footsteps can be minded by some autistic people
- Reflections: mirrors, shiny lamps, glass
- Uncomfortable textures: firm surfaces, cold metallic objects, etc
- Moving objects: curtains or doors swayed by the wind
- Objects with high contrast: chess boards, abstract paintings, colored cups, shiny lights
- Uncomfortable room temperature and humidity
- Room organization

www.youtube.com/watch?v=ycCN3qTYVyo
Physical structure: benefits

- Confers meaning to the context
- Facilitates working routines associated to spaces with activities
- Provides predictability to the environment
- Minimizes sensory stimulation
- Clarifies expectations
- Gives control over the context
- Helps to understand activities and situations
- Promotes personal autonomy

- Individualizes responses and proposals
- It is adaptable to individual necessities and interests
- Helps to maintain a better concentration and attention
- Useful to teach skills to be able to work in group and with others
- Promotes participation

Picture
Teacch: Schedules and agendas

They consist in orderly sequences of tasks to be performed providing the student clues to know what activities will take place over a period of time. They can also be used as an election panel to help the person make choices.

They can be designed according to the individual needs and characteristics of the autistic person:

- Communication system (words, pictograms, pictures)
- Individual or group work
- Vertical or horizontal direction
- Period of time (day, week, weekend)
- Specific information (medication, doctor’s appointments)
- Portable. If they need carry them
- Choice panel to help the autistic person to make decisions or rejections
- To highlight what it is important
Teacch: Work systems

• They provide a systematic way to help people with autism to complete their tasks and develop organization skills.
• As a complement for the schedule, it outlines the sequence of activities to follow during the day, giving anticipation to know what activity has to be done and how.
• They organize the tasks in a way that the person with autism knows what he/she has to do and in what extent.
• They provide a way of how he/she is progressing, when he/she has finished and what he/she should do next.
• The work systems are individualized, according to the level of understanding (objects, correspondence systems, written systems such as to-do lists).
Teacch: Visual supports

They are useful both for the autistic person and the professional since they help:

<table>
<thead>
<tr>
<th>The person with autism</th>
<th>The professionals</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To establish and maintain the attention</td>
<td>• To optimize the goals and proposals given</td>
</tr>
<tr>
<td>• To clarify the instructions and the information</td>
<td>• To reduce the intensity of individual supports</td>
</tr>
<tr>
<td>• To know when and how a task is completed</td>
<td>• To offer coherence and consistency in the teaching methods</td>
</tr>
<tr>
<td>• To obtain detailed instructions</td>
<td>• To offer coherence between the language utilized and the instructions offered</td>
</tr>
<tr>
<td>• To reduce the anxiety level</td>
<td>• To plan ahead of time and to organize the support</td>
</tr>
</tbody>
</table>

Examples of schedule, work system and visual structured task:
Teacch: Design of an individualized structured teaching

1. Gather information:
   - previous assessment of the environment, the person and the goals

2. Rehearse with the first design and evaluate the benefits
   - What is the location, who is present and who is in charge
   - Environment supports that could possibly help

3. Introduce modifications in the design if needed:
   - Restructure

The environment
- Strengths and weaknesses, interests, level of communication, Real performance or participation of the person with autism
- How is the situation handled, what performance is expected
- Observed necessities, Situations/Behaviors that require improvement

The specific characteristics of the autistic person
- What routine is expected to happen
- How are the instructions and actual interventions functioning, what support of communication is actually being used

The intervention objectives
- Situations that require support, design of supports
6. New technologies applied to intervention

What are ICT’s? Although there is no single universal definition of ICT, the term is generally accepted to mean all devices, networking components, applications and systems that combined allow people to interact in the digital world. Due to the increase in diagnosed cases of ASD, software and hardware dedicated to persons with autism have been developed for decades.

How can be used for therapy? This technology reinforce their strengths and work on their weaknesses, helping them to increase their vocabulary and communication skills by creating predictable environments and reducing the anxiety produced by real social situations. They offer multisensory stimulation; they foster or make it possible to work autonomously and develop the capacity for self-control and are highly motivating and reinforcing encouraging attention and lessening the frustration that may arise from making mistakes.

Extensive research has proven the efficiency of technologies as support tools for therapy and their acceptation by people with ASD and those who are with them on a daily basis.
Advantages of using ICT in Autism

- **Visual thinkers**
  - ICT uses icons that express ideas clearly
  - Universal symbols and design

- **Sensory issues**
  - Multisensory stimulation

- **Motivator**
  - Design
  - Engagement
  - Reduces anxiety

- **Individual Learning Style**
  - ICT are versatile and flexible
  - They adapt to the specific needs and characteristics of each person

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Areas of intervention that can be addressed through ICT

Communication
- Language
- Augmentative and alternative (AAC) systems

Social Interaction
- Emotional recognition
- Imagination
- Imitation
- Social skills
- Employability Skills

Behaviour
- Behaviour monitoring
- Collect physiological data to understand behavioural changes

Autonomy
- Time Management
- Organization / Planification Skills
- Choice making
- Executive functions

Motor Skills
- Support for fine motor skills
- Improve gross motor skills

Anxiety
- Help to reduce anxiety due to their predictibility
- This allows to work other cognitive skills such as attention

IPA+ Autism - training for inclusion

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Some ICT components used in autism: devices

Computers, tablets and Smartphones
In which different applications can be installed and used for the training and intervention in different areas helping to promote many skills in people with autism.

Telehealth Systems
They enable patient-doctor information exchange without having to go to the medical facilities, reducing the costs involved. Useful tools that allow fluent communication between clinicians and family members, providing the latter and people with ASD a great deal of support.

Robots:
show predictable behavior, produce controlled social situations and interact with persons in a simple manner. This makes people with ASD feel less anxious by making social situations less complex.

Wearables

Smartwatch

Virtual Reality Glasses: help autistic adults or children develop the skills necessary for independence. A virtual environment is a safe and ideal way of teaching these skills before encouraging the autistic person to try these out in the real world. This system features a number of scenarios which are all designed to teach autistic children how to cross a road. is also used to help autistic children with social attention problems, like reading facial expressions.

Smart bracelet: this device has biometric sensors that collect physiological data such as blood pressure, heart rate, body temperature and electrodermal activity to predict emotional stress and anxiety. This wristband is connected via bluetooth to the smartphone app that allows the user or professional to understand, prevent challenging behaviours so the caregiver can react by taking action to help in time.
Some ICT components used in autism: applications

Types of applications

• **Mixed technology applications** refers to virtual reality and augmented reality technologies. Mixed reality makes it possible to create and develop worlds in which real and computer-created elements are merged.

• **Dedicated applications** are technological tools targeting people with autism designed to be used on computers, tablets or mobile telephones, are mostly support tools to facilitate or assess their skills when communicating, with a focus on social skills.

Utilidades

• **Social learning**: recognize emotions and imitating skills

• **Play skills**

• **Imagination**: story tellers

• **Motor skills**

• **Communication**: help persons with autism to develop language and/or to communicate through images and sounds uses tactile technology and icons, symbols such as pictograms
## Applications: recommended features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoid distractor stimuli</td>
<td>• overload screen, irrelevant moving elements, strident or repetitive sounds</td>
</tr>
<tr>
<td>Intuitive, logical and orderly functioning</td>
<td>• predictable and easy to use</td>
</tr>
<tr>
<td>Visually distinctive interface and visual supports</td>
<td>• for example a click-and-drag option instead of text</td>
</tr>
<tr>
<td>Tasks with a start and end instead of neverending activities</td>
<td>• help to measure the amount of work to do and prevent from getting engaged in activities in a repetitive way or without a goal</td>
</tr>
<tr>
<td>Settings can be configured to meet the specific need of each user</td>
<td>• goals, scenarios, sound, reinforcement, etc</td>
</tr>
<tr>
<td>Includes import/export options</td>
<td>• so the task or activity can be used in different devices and contexts in order to enhance the generalization of the acquired skills</td>
</tr>
</tbody>
</table>
| Familiar font                                | • so the person don’t get confused reading the text  
• the application must be adequate to the development level of the person, to cover existing needs and, if possible, to take into account their centers of interest. |
| Gives feedback about the progress            | • monitoring own activity                                                                                                                                 |

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Some ICT components used in autism: applications

Examples: resources to develop different skills

• Time structure
• Communication
• Emotional recognition
• Social stories
Recommendations and new challenges using ICT in intervention

• Prevention
• Language
• Serious games
• Make clear when is used as a learning tool or as a recreation activity
• Worsen isolation if problems with social relationships
• Although ICT are an effective tool, we must not forget that collaboration from people is always needed in therapy or treatment
7. Diagnosis

• As we explained in the former module, available tests fail to recognize genetic abnormalities in about 70% of ASD children, where diagnosis is solely based on behavioral signs and symptoms, which are difficult to evaluate in very young children, even if there is plentiful research about biomarkers going on currently.

• In this sense, some studies point out that Occular Fixation of the children in their first years of life indicates the risk of Autism. Ami Klin results. BBMiradas is a programme being carried out which includes Eye-tracker technology

• Early intervention, before 2 yearsof age, appears to change the underlying developmental trajectories of the brain in individuals with ASD. This, along with the high prevalence indicates that early detection is a priority.
Early diagnostic evaluation: process

Recognize the possibility of ASD
The family identify early signs or red flags

Derivation to autism professional
Screening tools

To decide if a diagnosis is needed

Diagnosis
Early diagnostic evaluation: early indicators

• Recent research confirms that appropriate screening can determine whether a child is at risk for autism as young as one year. While every child develops differently, we also know that early treatment improves outcomes, often dramatically. Some studies show that early intensive behavioral intervention improves learning, communication and social skills in young children with autism spectrum disorders (ASD).

• This is why the parents or caregivers must learn the early signs of autism and become familiar with the typical developmental milestones that the child should be reaching.

• The following "red flags" may indicate a child is at risk for an autism spectrum disorder:

- No big smiles or other warm, joyful expressions by six months or thereafter
- No back-and-forth sharing of sounds, smiles or other facial expressions by nine months
- No babbling by 12 months
- No gesturing (pointing, waving, bye-bye, etc) by 12 months
- No single words by 16 months
- No meaningful, two-word phrases (not including imitating or repeating) by 24 months
- Any loss of speech, babbling or social skills at any age
Early diagnostic evaluation: screening tools

• Screening tools are designed to help identify children who might have developmental delays and can be specific to a disorder (for example, autism) or an area or they may be general, encompassing multiple areas of concern. They do not provide conclusive evidence of developmental delays and do not result in diagnoses. A positive screening result should be followed by a thorough assessment.

• The are different Screening tools currently used for early detection of autism are but only M-CHAT is free download:


  - CSBS DP Infant-Toddler Checklist (Wetherby & Prizant). 6-24 months
Diagnosis: diagnostic criteria

Diagnostic Criteria in autism fall into two main areas: SC deficits + Restricted/repetitive Behaviour, however, the diagnosis must specify if there is an intellectual or language impairment associated as well as other medical conditions or neurodevelopmental or mental disorders and also stipulate the severity level of the Spectrum.

Areas of symptoms
- Deficits in social communication and social interaction
- Restricted/repetitive patterns of behaviours or interests
- Criteria C,D,E

Conditions associated
- Intellectual or language impairment
- Medical or genetic condition
- Neurodevelopmental, mental or behavioural disorder

Severity Level
- Level 1: requiring support
- Level 2: requiring substantial support
- Level 3: requiring very substantial support

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## Diagnosis: DSM-5 vs ICD-10

<table>
<thead>
<tr>
<th>ICD-10</th>
<th>DSM-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The International Classification of Diseases, Tenth Edition (ICD-10) is a clinical cataloging system created by the World Health Organization, spelled out in its constitution and ratified by all 193 WHO member countries.</td>
<td>• The Diagnostic and Statistical Manual of Mental Disorders is produced by the American Psychiatric Association.</td>
</tr>
<tr>
<td>• It was released on January 1, 1999.</td>
<td>• Released in May, 2013</td>
</tr>
<tr>
<td>• Each region or country can modify it to meet their cultural needs</td>
<td>• Is the standard classification of mental disorders used by mental health professionals to identify the diagnosis</td>
</tr>
<tr>
<td>• ICD-10 continues to code Asperger’s Syndrome and Pervasive Developmental Disorders as specific diagnosis, nevertheless it is expected that the new edition that will be released in 2018 is closely align with the DSM-5 classification.</td>
<td>• DSM-5 has consolidated Asperger’s Syndrome into the Autism Spectrum.</td>
</tr>
<tr>
<td></td>
<td>• The Autism Spectrum Disorder falls into the Neurodevelopmental Disorders category.</td>
</tr>
</tbody>
</table>

**F84 Pervasive developmental disorders**
- F84.0 Autistic Disorder
- F84.2 Rett's Syndrome
- F84.3 Other Childhood desintegrative disorder
- F84.5 Asperger’s Syndrome
- F84.8 Other pervasive developmental disorders
- F84.9 Pervasive developmental disorder, unspecified

**299.00 Autism Spectrum Disorder**
- Autistic disorder, childhood desintegrative disorder, Asperger’s Syndrome and Pervasive developmental disorder consolidated within the category of ASD
- Rett disorder is eliminated
- 2 symptom categories: social communication and behaviour
- Sensory issues in the criteria
Differential diagnosis

The term Differential Diagnosis must be not mistaken for:

- **Diagnostic overshadowing**: occurs when the salience of one disorder (e.g., intellectual disability) ‘overshadows’ consideration or recognition of another disorder, with all symptoms being attributed to the primary disorder.

- **Comorbidity**: when the individual is affected by two distinct but concomitant disorders.

- **Overlapping symptoms**: symptoms that commonly occur during the course of two or more distinct disorders; for example, while depression and anxiety have distinct clinical features, irritability...
Differential diagnosis

In turn, **Differential Diagnosis** means…

- Many neurodevelopmental, mental and behavioural disorders may present with symptoms that suggest the possibility of autism but which are not autism. These can be described as the differential diagnoses of autism: the process by which the clinician determines which of two or more distinct disorders with similar symptoms is the one by which an individual is affected.

- It is important to establish an accurate diagnosis, whether that is autism or an alternative condition. An inaccurate diagnosis of autism may result in the use of an inappropriate treatment strategy and may cause anxiety and distress to the child or young person and their parents/carers.
Differential diagnosis

These are the most important disorders to be considered in children and young people presenting with possible autism and in the following slides we will explain how they may be differentiated from autism.

**Neurodevelopmental Disorders**
- Intellectual disabilities
- Global Developmental Disorder
- Communication disorders
- Specific Learning Disorders
- ADHD
- Motor Disorders

**Mental/Behavioural Disorders**
- Anxiety disorders
- Disruptive, Impulse Control and conduct disorders
- Obsessive-Compulsive and related Disorders

**Other Disorders and Conditions**
- Personality Disorders
- Hipoacusy
- Mistreatment
### Differential Diagnosis: Neurodevelopmental Disorders

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Differential Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intellectual Disabilities, Global Developmental Disorder</td>
<td>Delays in social communication must be more severe than would be expected for the developmental level. ID is the appropriate diagnosis when there is no discrepancy between the level of social-communicative skills and other intellectual skills.</td>
</tr>
<tr>
<td>Communication Disorders</td>
<td>Impairments in social communication without the presence of repetitive, restricted or stereotyped behaviors may meet the criteria for Social Communication Disorder. When those stereotyped behaviors are present, the diagnosis of ASD supersedes Social Communication Disorder. While social communication is a major fixture for a diagnosis of ASD it is only one piece. ASD can be differentiated by examination of repetitive behaviors, narrow interests and other components of its diagnostic criteria.</td>
</tr>
<tr>
<td>ADHD</td>
<td>Autism is no longer an exclusion criteria and both ASD and ADHD can be diagnosed together [DSM-5, 2013]. Although there are some important differences (e.g., core symptom definition and recommended treatment), ASD and ADHD share many similar impairments in different domains that could complicate a differential diagnosis</td>
</tr>
</tbody>
</table>
## Differential Diagnosis: Mental/ Behaviour Disorders

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Differential Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety Disorders</td>
<td>Comorbidity up to 70%. When diagnostic criteria for ASD are met, attention is given to specific criteria for anxiety disorders that are distinct from ASD criteria including significant distress when separating from caregivers, excessive worry about safety of caregivers, school refusal, selective mutism, fear of peer rejection. Indications of anxiety not consistent with ASD- social impairments do not persist with familiar persons, age appropriate social capacity, but not utilized effectively.</td>
</tr>
<tr>
<td>Obsessive Compulsive Disorder (OCD)</td>
<td>Repetitive behavior is performed in order to reduce anxiety; intrusive recurrent thoughts inhibit functioning. If social communication deficits are present, then ASD may more appropriately account for the repetitive behavior; if not, OCD is more appropriate. Overlap of specific compulsive behaviors such as touching stranger’s body parts or certain objects, concern and agitation around changes to routines like bedtime rituals may meld with the variety of restricted and repetitive patterns of behavior such as lining up toys or flipping objects associated with ASD. Children who are well and then develop OCD symptoms that have its onset associated with Streptococcal infection should be tested for Pediatric Autoimmune Neuropsychiatric Disorder associated with Streptococcal infection (PANDAS). OCD behaviors with acute onset now called Pediatric acute onset neuropsychiatric syndrome (PANS) should be considered as alternatives to a diagnosis of ASD.</td>
</tr>
</tbody>
</table>
| Disruptive, Impulse Control and Conduct disorders | • **Reactive Attachment Disorder** does not include the restrictive interests, unusual sensory reactions, repetitive (but not stereotyped) behavior.  
• **Opositional Defiant Disorder (ODD):** includes an element of vindictiveness, an awareness that behavior is annoying or disruptive to others and a pervasive sense of anger or resentfulness and emotional disregulation. With ASD, the noncompliant behavior results in lack of understanding the behavioral expectations for social situations  
• **Intermittent Explosive Disorder:** Magnitude exceeds that expected with ASD  
• **Conduct Disorders** involves the purposeful violation of social rules or violation of the rights of others. Antisocial behavior is proactive, predatory and purposeful. ASD related rule breaking behavior results from not understanding social rules or not possessing the skills to negotiate social rules |

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### Differential Diagnosis: Other Disorders and conditions

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Differential Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personality Disorders</td>
<td>Schizoid Personality Disorder: Flat affect and restricted range of emotions contribute to lack of social interactions, no interest in social relationships - a rejection rather than a lack of understanding or need for social interactions. Includes a distinct lack of pleasure in few, if any, activities. Very similar outward presentation between mild ASD and Schizoid- repetitive behavior and restricted interests are key differential diagnosis features.</td>
</tr>
<tr>
<td>Selective Mutism</td>
<td>Early social history and more typical behaviors in very specific settings can help to differentiate mutism from ASD.</td>
</tr>
</tbody>
</table>
Diagnosis tools

• In order to develop an effective individualized intervention, a comprehensive and multidimensional assessment must be carried out apart from the diagnosis, so it is important to check the clinic history and gather useful information in an specific way from different cognitive and social areas (development, communication, adaptative behaviour, sensory issues, intelligence, family functioning, game, etc)

• **Diagnostic Assessment:**
  
  • The Autism Diagnostic Interview-Revised (ADI-R) is a semi-structured, investigator-based interview for caregivers of children and adults for whom autism or pervasive developmental disorders is a possible diagnosis.
  • ADOS and ADOS-T
  • The Childhood Autism Rating Scale (CARS), helps to identify children with autism and to distinguish them from developmentally disabled children who are not autistic. Brief, convenient, and suitable for use with any child older than two years of age, the CARS makes it much easier for clinicians and educators to recognize and classify autistic children.
Diagnosis tools

- **Developmental Assessment**: The Psychoeducational Profile-Revised (PEP-R)
- **Adapative Assessment**: The Vineland Adaptive Behavior Scales (VABS) (Sparrow, Balla, & Cicchetti, 1984), DABS
- **Communication Assessment**: Peabody Picture Vocabulary Test (III), CDI, CCS, ESCS
- **Infant/toddler Assessment**: Bayley Scales of Infant Development (2nd ed.) (BSID-II) (Bayley, 1993).
- **Intelligence Tests**:  
  - The Merrill-Palmer Scale of Mental Tests (MPSMT) (Stutsman, 1931) is for children from one year and six months to six years. The MPSMT is widely used as a nonverbal test instrument for assessing visual-spatial skills,  
  - The Leiter International Performance Scale (LIPS) (Leiter, 1948) measures intelligence independent of language ability for children age three years and older.
- **Academic Screening**: The Wide Range Achievement Test 3 (WRAT3)
- **Behaviour Assessment** (different form Functional Behaviour Assessment): Sensory profile
- **Family Assessment**: interview,
- **Complete Medical Examination**

http://www.behavior-consultant.com/aut-dx-devices.htm

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Good practises

- **During the diagnosis process:**
  - Start the diagnosis process as soon as early signs are detected
  - Avoid derivations that make the process longer
  - Good coordination between professionals

- **Professionals implicated**
  - Ensure all professionals implicated have specific, specialized and updated training
  - Good coordination and advising along the process
  - Orientation for families about entities and services available for the autistic person and be clear with them avoiding ambiguous terms
  - Guarantee the privacity of the person with autism and their families
  - Make use of procedures and tools evidence based
Good practises

- When communicating the assessment results or diagnosis report
  - According the international classification criteria
  - Understable Report with a logic estructure to help family or autistic person to undertand it
  - Language: respectful, positive and comprenhesive avoiding euphemisms or ambiguous terms
  - Be kind and empathic with the family and the person considering the emotional state during the diagnosis process.
  - Elaborate, along the report, an assessment of the strenghs and specific needs required for the intervention
  - Offer a useful working plan providing the family with an inmediate route to follow in the future
  - Avoid suppositions or future expectatives about possible interventions that cannot be guaranteed from the Association or in the environment. Advice can be provided, but it must be avoided a future development cannot be guaranteed by an intervention or the therapy is not evidence based.
  - Facilitate information, training access, legal advicement, rights, obligations and the context with other families
8. Early Care

Early care is a set of multidisciplinary interventions destined at children between 0 and 6 years old and their families and environment to respond as quickly as possible to the transient or permanent needs of children with developmental disorders or who are at risk of suffering from them.

Programs of therapeutic and educational intervention, at different levels and focused on children between the ages of zero and six years who present difficulties in their development, their families and environment, aimed at preventing, or minimizing possible alterations or deficits already present. (Candel, 2000)
Why is early care important

• It is a right for people with ASD and is a vital factor in their future quality of life.

• Evidence indicates that some specific and intensive programs of Early Attention with autism achieve very significant improvements in the nuclear traits of the disorder.

• This rehabilitation during the first years of life makes subsequent development grow exponentially by having a base in communication and interaction skills acquired in Early Care.

• If the child does not receive care during these first years, a cascade effect will occur, that is, it will prevent or delay the learning of more advanced skills by not having the most basic ones.

• The brain and its ability to build new connections is greater the earlier the intervention, which is why it is essential that early detection also occurs. Brain plasticity:

It refers to the way in which our nervous system changes from its interaction with the environment.

In early childhood there is a greater capacity for recovery and organic and functional reorganization, which decreases in a very important way in the following years.

Increased ability to create new connections in the early years of life coupled with a stimulating environment coupled with intervention in the nuclear traits of autism makes early attention a critical factor in the future quality of life of people with ASD.
Objectives

1. Reduce the effects of a deficiency or deficit on the overall development of the child.

2. To optimize, as far as possible, the course of the child’s development.

3. Introduce the necessary mechanisms of compensation, removal of barriers and adaptation to specific needs.

4. To avoid or reduce the occurrence of secondary or associated effects or deficits caused by a high risk disorder or situation.

5. Meet and meet the needs and demands of the family and the environment in which the child lives.

6. Consider the child as the active subject of the intervention.
Characteristics of a good early attention

- It should play a key role for the family and the child with autism
- Extensive and intensive: It must be developed at all times, in a generalized way and by the people who make up the social and educational environment of the child
- Useful and functional learning
- Working the nuclear traits of autism: social communication, play, interaction skills ...
- Working with specific methodology for autism and with expert professions
- Coordination of the interdisciplinary team is vital for good early care
Early care methods

The ideal is a mixed intervention with a great weight of intervention in natural contexts

Depending on their intensity, they may be:

• Low intensive: less than 15 hours per week
• Intensive: 15 to 25 hours
• Highly intensive: 25 to 40 hours

The more intensive the intervention, the better evidence of improvements
Early Care Programmes

Characteristics

- Intensive or very intensive methods
- They seek the training of families to become
- They place great emphasis on the systematization of data and the evaluation of objectives
- Systematic development of interaction skills, communication, play ... based on the motivations of the child
- Mixed intervention with preference for natural, community and peer environments

Main Early Care Programmes:

- Early Start Denver Model
- Hannen Programme
- SCERTS Model
The Early Start Denver Model (Rogers & Dawson, 2009)

Based on relationships and family-centered
- Parents are included in the activities.
- Objectives are established between the team and the parents.
- The parents administer the intervention brothers and all the family involved.
- Parent support is encouraged. (explicit teaching)

The Denver Curriculum
- Pre and posttreatment assessment
- Areas of development between 8 and 48 months.
- Repertory of skills
- Individual intervention in planning and curriculum
- It consists of different areas in which there are 4 levels depending on the complexity of the skills

Methodology
- Use of routines with objects and social
- Use of the motivation of the child
- Systematic evaluation of objectives and individualized planning
- Give choice options with the child deciding

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Areas of intervention in the Denver Model curriculum

These areas can be divided into 4 levels depending on the complexity of the skills:

- Receptive language
- Expressive language
- Joint attention
- Social intervention
- Fine motor
- Gross motricity
- Imitation
- Cognition
- Game
- Tasks and personal autonomy

Limitations: time and cost, evidence based? Most used
The Hannen Programme

The intervention program focuses on training and empowering families:

- Families afterwards are those who intervene with their children in the day to day, seeking to develop communication.
- Duration of three to four months, and involve meetings of a duration of two hours every two weeks.
- Use of videomodelling as a training tool for families.

It involves teaching parents strategies for achieving:

- Ways to communicate with your child
- What motivates your child to communicate
- How to make activities of daily living become opportunities for your child to learn the language
- How to respond to your child in ways that favor language learning
- Talking so your child can understand
The SCERTS Model (Prizant, Wetherby, Rubin & Laurent)

**Intervention with children with autism and their families:**
- Demanding and scheduled coordination program
- Evaluation and development of specific objectives

**Flexible methodology:**
- Possibility incorporate practices from other approaches, including ABA, TEACCH, Floortime, RDI, Hanen, and social stories

**Areas of intervention:**

<table>
<thead>
<tr>
<th>Social communication</th>
<th>Emotional regulation</th>
<th>Specific support (transactional support)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• It focuses on building a child's spontaneous functional communication, emotional expression and social relationships that allow him to be a competent and confident communicator in many social settings and with different interlocutors.</td>
<td>• It focuses on helping a child become more available to learn and interact, as well as to prevent behavioral problems that interfere with learning and developing relationships.</td>
<td>• Ensure appropriate support in the area that best supports the child and his family, including peer relationships in inclusive settings.</td>
</tr>
</tbody>
</table>

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9. Development of social-communication skills

• **Great diversity:** there is a wide range of language ability in autism that goes from non-verbal to fluently verbal. The assessment of the communication skills is crucial to implement an individualized intervention.

• The impairments in social communication, language, and related cognitive skills and behavioral and emotional regulation mentioned in the diagnostic criteria are significantly influenced by an individual's developmental level of language acquisition and the level of severity of the disorder.

• Difficulties in social communication in autism result in frustration, anxiety and social isolation so developing the social-communication skills is crucial to improve the autistic person quality of life.

• Communication entails not only language but also social cognition and reciprocity
# Communication in autism

## Social Cognition
- **Explicative theories in autism** show how communication is affected at different levels:
  - **Theory of Mind**: difficulty to identify and understand the thoughts, feelings and intentions of the others
  - **Central Coherence**: focus on details or specific aspects so it’s hard to integrate diverse information to construct meaning in the context (words + body language + situation)
  - **Executive functions**: difficulties to organize and structure information and action, to know what is relevant or secondary
  - **Joint attention**: Difficulty orienting to people in social environments, monitoring their emotional states and sharing emotions or interests

## Language
- **Semantics**
  - Communication throughout behaviour in non-verbal persons
  - Delayed language development in verbal persons is very frequent, so it can be considered a red flag in early detection
  - Difficulties in deictic categories (pronouns inversion)
  - Difficulties to organize in categories
  - Restricted or sophisticated vocabulary
  - Neologisms
  - Abnormal prosody: volume and tone of the voice and rhythm of the speech: sounds robotic
  - Echolalia: repeats words or sentences
- **Pragmatics**
  - Difficulty to adequate vocabulary and topics to the context (where, when and who are they talking to)
  - Problems understanding figurative language, multiple meanings, irony and sarcasm, takes things literally
  - Miss nonverbal cues: understanding of gaze shifting, facial expressions, rules of proximity and body language
  - Difficulties managing discourse: organization, structure, coherence

## Social reciprocity
- **Less social interaction.**
- Don’t seek engagement and comfort from others
- Sometimes, they ignore voices around them though they do respond to other non-vocal stimuli
- The child with ASD typically uses words to regulate his or her environment, rather than for social reasons
- Not always provide contingent responses to bids for interaction
- Limitations in considering another’s intention and perspective
- Inappropriate statements because of lack of awareness of the its impact on others
- Conversation: difficulty initiating topics of shared interest, provision of inappropriate and unnecessary information, tendency to perseverate on a topic, limitations with maintaining turn-taking interactions
Assessment of social-communication skills in autism

To provide an efficient intervention that allows the person with autism to improve their abilities to communicate and quality of life, it is important to do a previous assessment of their social-communicative skills to know which areas must be prioritary and how to address them during the intervention.

Most common assessment tools:
- CSBS (6 – 30 months)
- Peabody: receptive
- PPVT-4. Receptive lexical knowledge
- Vineland Receptive Communication Domain
- ADOS

Curriculum-based Assessment for children:
- SCERTS,
- Early Start Denver Model
- Hannen Programs
Assessment of social-communication skills in autism

Areas in the assessment of social-communication

Receptive language and expressive language

Functionality of verbal and non-verbal communication

Literacy skills

Social communication
- Use of gaze and gestures
- Joint attention
- Initiation of communication
- Social reciprocity and range of communicative functions
- Sharing affect

Conversational Skills
- Topic management
- Turn-taking
- Providing appropriate information in conversational contexts

Speech prosody

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Development of social-communication skills

- Once the assessment is done, the intervention must be done according to the person with autism communication level

- In general promote:
  - Interaction: giving chances to communicate
  - Functionality: adaptative strategies
  - Autonomy: making choices

Some specific strategies to provoke communication are:

- Eat a desired food in front of them
- Activate toy with sound or light
- Browse magazines or books
- Give them things to keep
- Make soap bubbles
- Interrupt interactive game
- Inflate / deflate balloon
- Offer something they dislike
- "Desired Box"
- Sensory toys and materials
- Interrupt / delay routine
- Incomplete puzzle
- Dropping things
- Play a joke
- Opportunities and Multiple-Choices
- Noisy objects
- Missing material when starting a play
- Missing material in sight but out of reach
- Say "goodbye" when toys are being kept
- "Magic words"
- Closed Exit Door
- Offer wrong material when playing
# Development of social-communication skills in children

<table>
<thead>
<tr>
<th>Address Joint Attention</th>
<th>Promote Imitation Skills</th>
<th>Encourage requests</th>
<th>Widen their vocabulary</th>
</tr>
</thead>
</table>
| • Use attractive stimuli: sensorial toys or high interest objects  
• Find opportunities to interact throughout play | • Imitate them, so they notice and imitate back, adding something new for the child to copy  
• Use gestures and facial expressions when interacting | • Offer a toy that is difficult to operate so they can ask for help  
• Let them make choices between two things  
• Teach them words to end an activity | • Use expansions by repeating what they say adding information  
• Name things when they reach for them |
## Development of social-communication skills in non-verbal persons

<table>
<thead>
<tr>
<th>Train behaviour</th>
<th>Control the environment</th>
<th>Strategies to facilitate communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Autistic people without spoken language sometimes resort to challenging behaviours to meet their needs or express their feelings</td>
<td>• Promote autonomy by making the environment more predictable</td>
<td>• Offer wrong material or with missing parts</td>
</tr>
<tr>
<td>• Use Functional Analysis Behaviour (FAB) to understand the function of that behaviour, then teach them an alternative adaptive behaviour for the same purpose</td>
<td>• Avoid noise and distractors</td>
<td>• Use or eat something they like in front of them</td>
</tr>
<tr>
<td></td>
<td>• Reduce verbal input</td>
<td>• Let them make choices, this is a quality of life indicator</td>
</tr>
<tr>
<td></td>
<td>• Use visual supports</td>
<td>• Use AAC devices to communicate: PECS, Sign language, communication boards with words, photos and/or symbols</td>
</tr>
</tbody>
</table>
### Development of social-communication skills in verbal persons

<table>
<thead>
<tr>
<th>Pragmatics</th>
<th>Social Reciprocity</th>
<th>Use natural contexts</th>
</tr>
</thead>
</table>
| • Improve literal understanding: give them examples of figurative language, multiple meanings, expressions, teach them how to identify irony  
• Non-verbal communication: body language, facial expression, gestures, proximity, gaze  
• Prosody: tone, ryhtym  
• Make a video so they can see and listen to theirselves to identify what to improve  
• Try saying the same sentence with different tones or gestures  
• Discourse management: turn-taking, what topics are appropriate in different situations, use examples  | • Train active listening: give them keys to identify if the other is bored or interested  
• Teach them how to make a compliment or how to choose a present for someone  
• Build Theory of Mind skills by training perspective talking with videos or real life situations: make them guess how the person might be viewing the situation  
• Self evaluation and monitoring to develop independence and flexible application of skills  | • Social interaction with peers in natural contexts: help generalization of the acquired skills  
• Use different strategies to anticipate these situations and reduce anxiety:  
  • Role playings  
  • Social stories provide background knowledge about a topic  
  • Scripts, modelling, comic strip situations  |

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10. Supports for adult life

- Difficult stage.
- Dealing with the changes associated with puberty and the cognitive and social limitations.
- Families concerned about the future.
- There is no clear correlation between the "severity" of symptoms in childhood (behavior) and adulthood.
- Unlike in the educational stage, different visions of the adults are manifested by the society, family ...
- Anticipate and prepare for the longer stage of life.
- Less number of services than in the educational stage
- Challenge for organizations: creation of an integrated network of resources and supports that offers opportunities that do not exist by other means.
- Fewer references in research (3.75% research on the educational stage of the total research, 0.66% on employment).
Adult life in autism

Characteristics of adulthood in autism are influenced by the changes that take place both in the individuals and the demands of the context:

**Individual**
- Physical and hormonal development (hours of sleep, feeding, ...).
- Awakening sexual behaviors, sexual identity.
- Self-assertion.
- Self-determination.
- Independence, autonomy. Discovery of the "solitude".
- Change in social roles with the environment.
- Preference for the peer group

**Context**
- Mischief VS behavior problem
- Caress VS sexual behavior
- Child behavior VS problem with the environment
- Society becomes more intolerant, less understanding, more demanding
- Contexts are more open, less structured, less protected, more unknown, less friendly

**Adulthood in ASD**
- Reappearance of problematic behaviors, appearance of new ones.
- More sophisticated or changing communicative demands. Isolation.
- Infantile behaviors.
- Need of own space.
- Demand for autonomy.
- Boredom with activities "forever".
- Boredom of people "always".
- Preference towards "equals"
Adult life: Areas of intervention

Many of these issues have been addressed along the module, nevertheless, it worthwhile to mention them once more, being the main areas of intervention during the adult life:

**Autonomy and self-care management**
- Urgency
- Ability to mobilize any form of help, including other people and not depending on what is available to one
- Not being subject to own desires, control or delay impulses, plan and supervise one's actions, self-management
- Need to be aware of one's abilities and be flexible when using them
- The mere responsibility for self-care and maintaining a healthy lifestyle becomes the expectation of independence
- Choices with information
- Generalized routines
- It emphasizes the right that each person has to make their own decisions
- Ethical considerations

**Social relationships**
- Eager to meet young people, peers
- Need to change the persons of reference
- Expectations of taking on the expected roles at each age
- Group awareness, membership
- Prevention of bullying or moving
- Grieving

**Sexuality**
- Physical changes:
  - Prevent and act before they happen
  - Identify signs of fear or distress
  - Learning healthy, hygienic behaviors
  - Notion of privacy / protection
  - Emotional stability
  - Sexual behaviours rise up
  - Attraction to other people
  - Sexual identity
  - Sexual behaviors
  - Masturbation
  - Prevention of harassment (stalker prevention)

**Employment Skills**
- Accessibility to employment
- In order for the work to have some meaning or dignity, it must be real
- Is working the only significant lifestyle ????
- A job environment must be productive, meaningful and offer opportunities
- Work must be the starting point, or the result of an integral maturation process
- Important to take into account:
  - Limitation of professional interests and necessity to adapt the work requirements to the personal profile.
  - Decompensation between job-specific job skills and social skills related to behavior and adaptation to the work environment.
  - Great variability.

**Independent Life**
- Independence = autonomy + choices = Quality of life
- Independent life: 5-10%
- Independent living with supports and supervision in relevant areas: 25%
- Intense support needs in all significant areas of adult life: 65-70%

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Adult life: Areas of Intervention: Employment Skills

TRAINING / LABOUR INTEGRATION
A continuum of options, a process that encompasses all those formulas that enable people to develop functional work, adapted to their abilities and in the most standardized conditions possible,

Starting with a personalized work itinerary

Individualized Work Placement Pathway, is the process developed in phases, supported by a methodology focused on the person, which allows to guide and determine their abilities and interests, thus allowing to define and provide the necessary supports to favor their inclusion and therefore improve their quality of life (Jordan & Kurtz, 2008).

Achieving a Good Job Match: Considerations For Placement Planning and Assessment
- The most important consideration in helping an individual with ASD find a job is the job match. When helping a person with ASD find a good job match, three broad areas must be considered:
  - The interests and skills of the person with ASD;
  - The individual with ASD’s learning style; and
  - The environmental demands on the worker with ASD—including communication, sensory, social, and organizational.
Adult life: Areas of Intervention: Employment Skills

Autism and strengths

- Honest, transparent and genuine
- Perfectionist, precise and thorough
- Great visual information processing
- Working capacity and concentration
- High tolerance to routines
- Fatigue resistance
- Good visual/spatial capacity
- Great memory for data

Supports:

- Priorization of tasks
- Time managing
- Flexibility and managing unexpected events

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Strengths for working</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-verbal</td>
<td>Unlikely to interrupt coworkers</td>
</tr>
<tr>
<td>Limited Social Interest</td>
<td>More focused on the task</td>
</tr>
<tr>
<td>Sensory preferences</td>
<td>Will enjoy working on a silent working place</td>
</tr>
<tr>
<td>Rigid preference for limits and rules</td>
<td>Punctuality, takes breaks at the appropriate time and returns on time</td>
</tr>
<tr>
<td>Ritualistic or compulsive</td>
<td>Meticulous with details and quality control</td>
</tr>
</tbody>
</table>
RANGE OF POSSIBLE JOBS FOR PEOPLE WITH ASD

- Place books on library shelves
- Photocopy documents
- Replenish shelves in supermarkets
- Math teacher
- Financial analyst
- Text editor
- Veterinary technician

- Work in production line of a factory
- Concierge and cleaning
- Computer programmer
- Engineer
- Create indexes for books
- Garden designer
- Biology teacher

**Suitable jobs for verbal and non-visual thinkers**

<table>
<thead>
<tr>
<th>Job</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journalist</td>
<td>Financial Analyst</td>
</tr>
<tr>
<td>Budget Analyst</td>
<td>Book Index Maker</td>
</tr>
<tr>
<td>Translator</td>
<td>Text Editor</td>
</tr>
<tr>
<td>Book keeper and archiver</td>
<td>Accountant</td>
</tr>
<tr>
<td>Library Scientist</td>
<td>Specialist in inventory control</td>
</tr>
</tbody>
</table>

**Suitable jobs for musical thinkers and mathematicians**

<table>
<thead>
<tr>
<th>Job</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Programmer</td>
<td>Electronics Technician</td>
</tr>
<tr>
<td>Math teacher</td>
<td>Musician/ Composer</td>
</tr>
<tr>
<td>Engineer</td>
<td>Music teacher</td>
</tr>
<tr>
<td>Chemist</td>
<td>Statistician</td>
</tr>
<tr>
<td>Physicist</td>
<td>Scientific Researcher</td>
</tr>
</tbody>
</table>
Steps to develop an Individualized Work Placement Pathway

**Assessment**
- Vocational Profiling
- Collecting employment information
- Preferences of the autistic person
- Career planning

**Intervention Program**
- Develop supports strategies
- Develop employment skills

**Monitoring**
- Employment skills registration
- Coordination with the employer and follow up

IPA+ Autism - training for inclusion

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Adult life: Areas of Intervention: Employment Skills

Types of employment contracts:

- Employment with support / Ordinary Employment
- Internships in real contexts
- Pre-employment workshops
- Training in labour skills Workshops

http://www.communityinclusion.org/article.php?article_id=266

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- https://iancommunity.org/cs/articles/prob_behav
- https://www.autismspeaks.org/family-services/health-and-wellness/sleep
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4770638/
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4131130/
- http://www.behavior-consultant.com/aut-dx-devices.htm Diagnosis

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Links and resources

Challenging behaviour
• http://www.pent.ca.gov/frm/functobserv.pdf

Intervention in the emotional-sexual sphere
• https://www.youtube.com/watch?v=Jz8suLILovo

Health and nutrition
• https://www.autismspeaks.org/family-services/health-and-wellness/sleep
• https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4770638/
• https://www.autismspeaks.org/family-services/health-and-wellness/sleep

Organization of times and spaces
• www.teacch.com

Sensory issues
• https://www.youtube.com/watch?v=ycCN3qTYVyo

Intervention using ICT
• https://www.youtube.com/watch?v=DgDR_gYk_a8
• http://www.callscotland.org.uk/downloads/posters-and-leaflets/ipad-apps-for-complex-communication-support-needs/

Diagnosis
• http://www.behavior-consultant.com/aut-dx-devices.htm
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- Guía de intervención ante los trastornos de la alimentación en niños y niñas con Trastorno del Espectro Autista (TEA). María Baratas, Nuria Hernando, María Jesús Mata y Lucía Villalba.
- El autismo desde dentro. Hilde De Clercq. Página 273
- El acceso al currículo por alumnos con trastornos del espectro del autismo: Uso del Programa TEACCH para favorecer la inclusión. Gary Mesibov y Marie Howley
Bibliography (Spanish)


Links and resources (Spanish)

Intervención de conductas desafiantes

Intervención en la esfera emocional-sexual
- https://www.youtube.com/watch?v=Jz8suLILovo

Salud y nutrición
- https://www.autismspeaks.org/family-services/health-and-wellness/sleep
- https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4770638/
- https://www.autismspeaks.org/family-services/health-and-wellness/sleep

Organización de espacios y tiempo
- www.teacch.com
- https://www.youtube.com/watch?v=ycCN3qTYVyo

Nuevas tecnologías aplicadas a la intervención
- https://www.youtube.com/watch?v=DgDR_qYk_a8
- http://www.elviajedeelisa.es/
- http://www.educacontic.es/
Link and resources (Spanish)

Nuevas tecnologías aplicadas a la intervención
• http://apple.ididactic.com/
• http://es.slideshare.net/peremarques/tabletas-digitales-uso-educativo-metainvestigacin-dim
• http://www.guiatictea.org/
• http://www.doctortea.org/entra/

Diagnóstico
• http://mchatscreen.com/wp-content/uploads/2015/05/M-CHAT-R_F_Spanish_Spain.pdf

Apoyos para la vida adulta
• http://www.educastur.princast.es/fp/hola/simulador/simulador.html
The IPA + Partnership

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