

Understanding Autism Spectrum Disorders:

**Cognitive Abilities: A different way of thinking and learning profile; and
Managing Challenging Behaviour in Children with Autism**

Dr Tony Attwood

Different types of thinkers:

Group 1 - Visualizers

- Ⓢ strength in visual reasoning & problem solving - but can't convert to speech. If they try to convert to speech, it slows them down.
- Ⓢ picture is worth a 1000 words
- Ⓢ difficulty converting thought and emotion to speech
- Ⓢ Best way to learn is visually (e.g. screen, iPad)
- Ⓢ Like factual information and knowledge
- Ⓢ Identify the key information when communicating
- Ⓢ Use silent demonstration (they can concentrate on EITHER visual OR verbal)

Group 2 - Verbalizers

- Ⓢ Natural ability for language
- Ⓢ Relatively advanced verbal reasoning skills
- Ⓢ Well developed vocabulary
- Ⓢ Understanding may be improved by **READING** about the concept (e.g. Social Stories)\understand and remember what has been written rather than what has been said
- Ⓢ Challenge is social conversation (strategy- 'close your eyes -create a you tube video in your mind of what I am telling you).
- Ⓢ Very slow processing time as need to process each part of what has happened or said. Processing time to identify internal emotions. May present as a delay in response to an act, i.e. retaliation hours or days later.

Group 3- Reading

- Ⓢ May have better reading accuracy than comprehension
- Ⓢ May present in later years
- Ⓢ Irlen lens overlays

Group 4 - Mathematics

- ⓐ Talent or difficulty
- ⓐ Numbers can be perceived as shapes not quantity
- ⓐ If a strength, they may not be able to put it into words as they may visualise moving quantity - not a typical process.
- ⓐ Like the concreteness of maths, and that it is either right or wrong - not a blurry subject

One track mind:

- ⓐ Can work well for some problems but means they are unable to problem solve if there is a blip in the usual plan.
- ⓐ They may not be able to identify there is a problem therefore do not seek help.
- ⓐ Continue using incorrect strategy
- ⓐ Inflexibility of thinking (e.g. you can use a brick to?)
- ⓐ Anxiety increases cognitive rigidity and they are unable to take in information when anxious

Problem solving

- ⓐ Making a mistake can be very distressing for them
- ⓐ Inability to have plan B. Often has a plan of the day at waking , any change - can quickly hit the panic button
- ⓐ Intense negative emotional reaction
- ⓐ Giving up quickly ends the pain

Fear of making a mistake

- ⓐ A phobic reaction to making a mistake
- ⓐ Don't try then can't fail
- ⓐ Mistakes prove you are stupid
- ⓐ Do errorless learning - want to avoid the word 'no'
- ⓐ Allergic to errors - inhibits learning

Strategies

- ⓐ Verbalise it - speak aloud
- ⓐ Model problem solving
- ⓐ Re-enact and practice new strategy as soon as possible

- Ⓢ Visual memory and practice has better recall
- Ⓢ Appeal to their needs (you're smart)
- Ⓢ When hit the panic cabinet, can't get into the strategy filing cabinet and only response is a melt down or shut down.
- Ⓢ Need the child to be calm to access and teach strategies

Weak Central Coherence

- Ⓢ It's like a torch beam in a dark room. Can see the detail but not the overall picture
- Ⓢ Neuro-typical focus on people. People with ASD focus on detail.
- Ⓢ Affects of seeing the detail e.g. face in parts - not as a whole
- Ⓢ Research 'draw me a picture of your classroom and playground'. ASD drew detail, no people (or may draw themselves in different settings, but others)

Sensory sensitivity

- Ⓢ Startle response to specific sensory stimuli which does not lesson with habituation.
- Ⓢ One of the reasons for social confusion is that in infancy we're exposed to an explosion of social sensory stimuli (mother's smell, hugs, clothes, nappy changes, baths). With sensory sensitivity, the brain shuts down and then doesn't engage in social (hyper-sensory) situations
- Ⓢ In a world of a terrifying sensory experiences you need an escape mechanism.

a. Auditory defensiveness

- Ⓢ Acute auditory sensitivity to specific sounds
- Ⓢ Sudden or sharp sounds
- Ⓢ Specific pitch
- Ⓢ All the behaviour modification will not stop this being hyper painful

Strategies for auditory defensiveness

- Ⓢ Identify what is the cause.
- Ⓢ Barriers e.g. earplugs
- Ⓢ Avoid
- Ⓢ Camouflage with music or iPod
- Ⓢ Social story

b.Tactile defensiveness

- Ⓢ Fabrics
- Ⓢ Haircuts
- Ⓢ Hugs
- Ⓢ Increase or decrease in pain or temperature awareness e.g. pain on full bladder or bowel.

Strategies for tactile

- Ⓢ Deep pressure
- Ⓢ Sensory integration
- Ⓢ Awareness e.g. fabric

Coping mechanisms they may use

- Ⓢ Hyper vigilant/shell shocked
- Ⓢ Self hypnosis - repetitive actions
- Ⓢ Stimming
- Ⓢ Sensory profile needed (even colours, aromas, lighting)

Behaviour is communication

- Ⓢ When everything shuts down, behaviour is the only means of communication.
- Ⓢ Need to acquire an alternative means of communication using actions
- Ⓢ Thermometer - what are the signals to show an increase in anxiety or agitation.
What can you do to support the person.

Rules of Management

- Ⓢ Get rid of social
- Ⓢ In the moment don't re-hash
- Ⓢ Adult remains neutral
- Ⓢ Allow for person to do what calms or makes them happy
- Ⓢ AAC is invaluable for the non verbal communicators
- Ⓢ Decrease verbal complexity
- Ⓢ Decrease length of utterance
- Ⓢ Clear, simple instructions
- Ⓢ Short break between words for processing time
- Ⓢ Demonstrate

- Ⓢ One instruction at a time
- Ⓢ Match length of utterance to level of comprehension and memory
- Ⓢ Be silent and frozen to allow for processing

Rephrasing is like windows operating system opening a new program and then crashing

Anxiety

- Ⓢ Often anxiety is a constant companion.
- Ⓢ Can measure anxiety, relaxation, sleep, and agitation via heart rate - fit bit. You may not see the outward signs until explosion. May show child is more stressed than appears.
- Ⓢ Bio feedback from fit-bit.
- Ⓢ Intensity of expression - they have 1-2 and 9-10 (on/off, not 1-10)

Triggers for anxiety

- Ⓢ Change
 - Ⓢ Disruption to routine
- Ⓢ Social situations
 - Ⓢ Centre of attention
 - Ⓢ Performance
 - Ⓢ No social rules
- Ⓢ Fear of failure
- Ⓢ Sensory experiences
- Ⓢ When they are told wait, no hurry, not fair
- Ⓢ Unpredictable noise, experiences or environments

Way people with ASD cope with anxiety

- Ⓢ Controlling experiences
 - If you share you lose control
 - Passive - aggressive
 - Emotional blackmail
 - Negative reinforcement
- Ⓢ Will not comply
- Ⓢ Terrorist at home
- Ⓢ Routines and rituals

- Soothing and relaxing to feel safe and calm
- Can be prolonged and complex (not always obvious)
- Can become superstitious
- Anticipated sequence
- Ⓢ Special interest as a thought blocker
- Ⓢ Explosion or melt down
 - Cleansing the system
 - Negative reinforcement

Important to have a tool box of strategies to maintain a good level of regulation

- Ⓢ Physical activity
- Ⓢ Relaxation training
- Ⓢ Special interest time
- Ⓢ Music
- Ⓢ Solitude
- Ⓢ Repetitive actions
- Ⓢ sleep

What behaviour looks like		What you can do
		