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Understanding Sensory Processing Difficulties

Aims of sessions

- Understand my child/YP's sensory processing difficulties better
- Gain ideas for supporting my child/YP sensory processing needs
- Reducing the confusion re: Sensory/OT and the evidence base.

CONFUSION I:
OCCUPATIONAL THERAPISTS
◦ **DO “SENSORY” DON’T THEY?**

No!!

OCCUPATIONAL THERAPIST

(It's okay, no one knows what we do.)



Occupational Therapy = Occupation

I.e. How you “**occupy**” your time,
what you do during the day

What you choose to do
and need to do



Childhood Occupations:

Self-Care, Play & School (& helping at home)



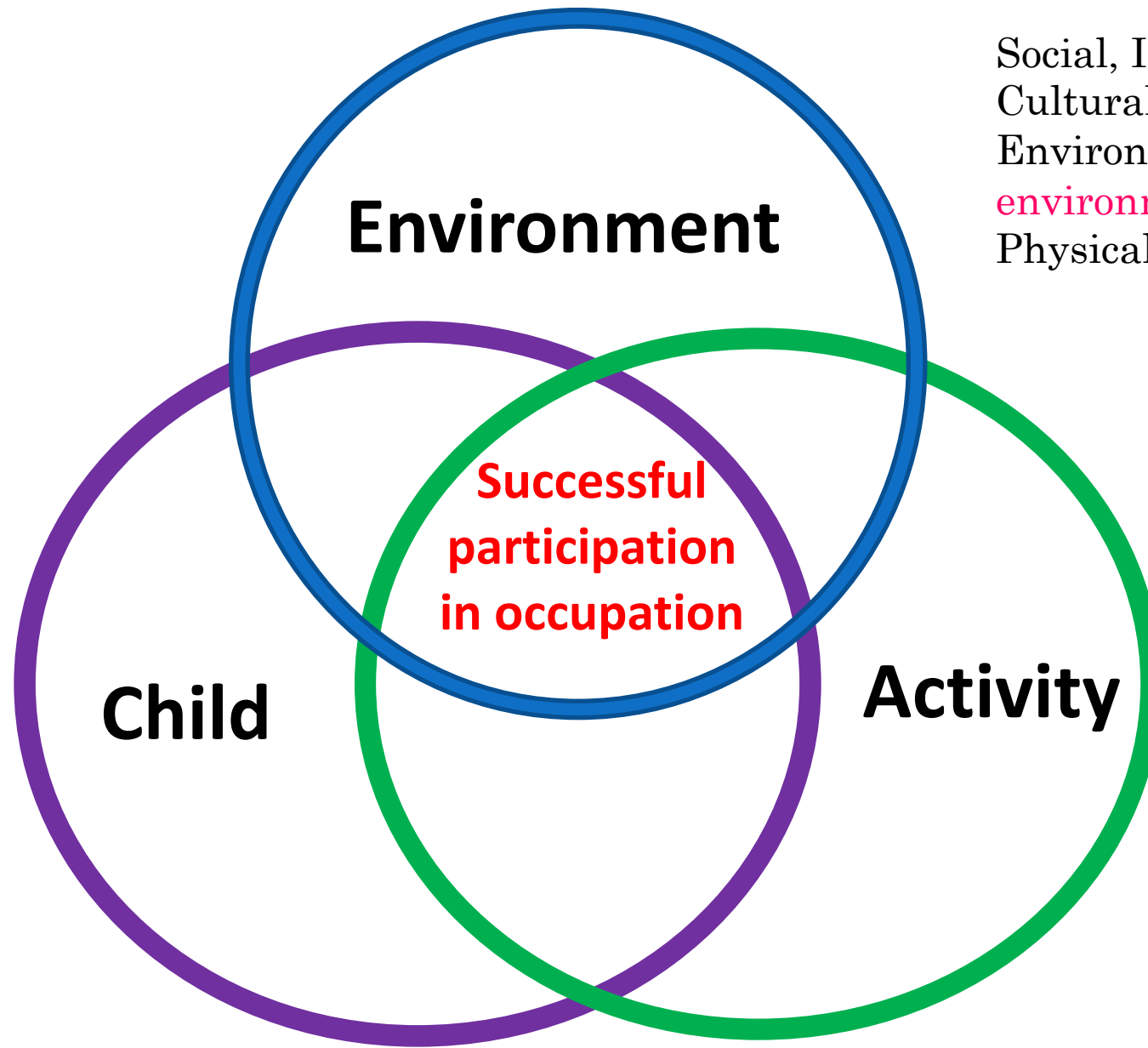
World Federation of OT definition

Occupational therapy is a client-centred health profession concerned with promoting health and well being through **occupation**.

The primary goal of occupational therapy is to enable people to participate in the **activities of everyday life**.

Occupational therapists achieve this outcome by working with people to enhance their ability to engage in the **occupations** they want to, need to, or are expected to do....

by modifying the **occupation** or the environment to better support their **occupational** engagement. *(WFOT 2012)*



Social, Institutional,
Cultural, Physical
Environments (**sensory
environment** sits within
Physical)

Motor,
Cognitive,
Emotional
Social
Communication
Sensory
Personality/Motivation

Why the confusion With OT & Sensory Processing Difficulties?

- Ayres Sensory Integration Therapy: Treatment approach developed in 1960's by an Jean Ayres OT/Ed Psych
- OT's can train to become **Advance Sensory Integration Practitioners** as can physio, SLT's, psychologists etc.
- **NOT OT specific!!**
- Popular with OT's that work within private practice.



Royal College of Occupational Therapy

Practice Briefing on Sensory Integration (2015)

- OT is not Synonymous with Sensory. “Sensory” does not belong to OT!!
- OT’s focus is Occupation
- Sensory is one very small part of our assessment and treatment for helping a child participate more fully in their daily occupations

An Occupational Therapist can help your children if they are struggling with any of these activities...



Going to the park



Clearing up after play



Getting dressed
Going to the toilet



Scribbling and drawing



Eating and drinking



Listening to stories
Singing songs with actions



Playing with toys



Sleeping
Having a bath



Playing outside



OVERVIEW OF SENSORY PROCESSING DIFFICULTIES

Terminology

- Sensory impairments: physical damage or changes to sensory organs and structures.
- Sensory processing difficulties: No changes or damage to the person sensory organs or structures.

The difficulty relates to how sensory information is processed

According to SI Theory

There are 7 senses.

- **Five** that respond to sensory input from *outside* of our body.
- **Two** hidden senses that respond to sensory input *inside* our body.

Sensory Differences

Visual
(sight)



Olfactory
(smell)



Gustatory
(taste)



Vestibular
(balance)



Auditory
(hearing)



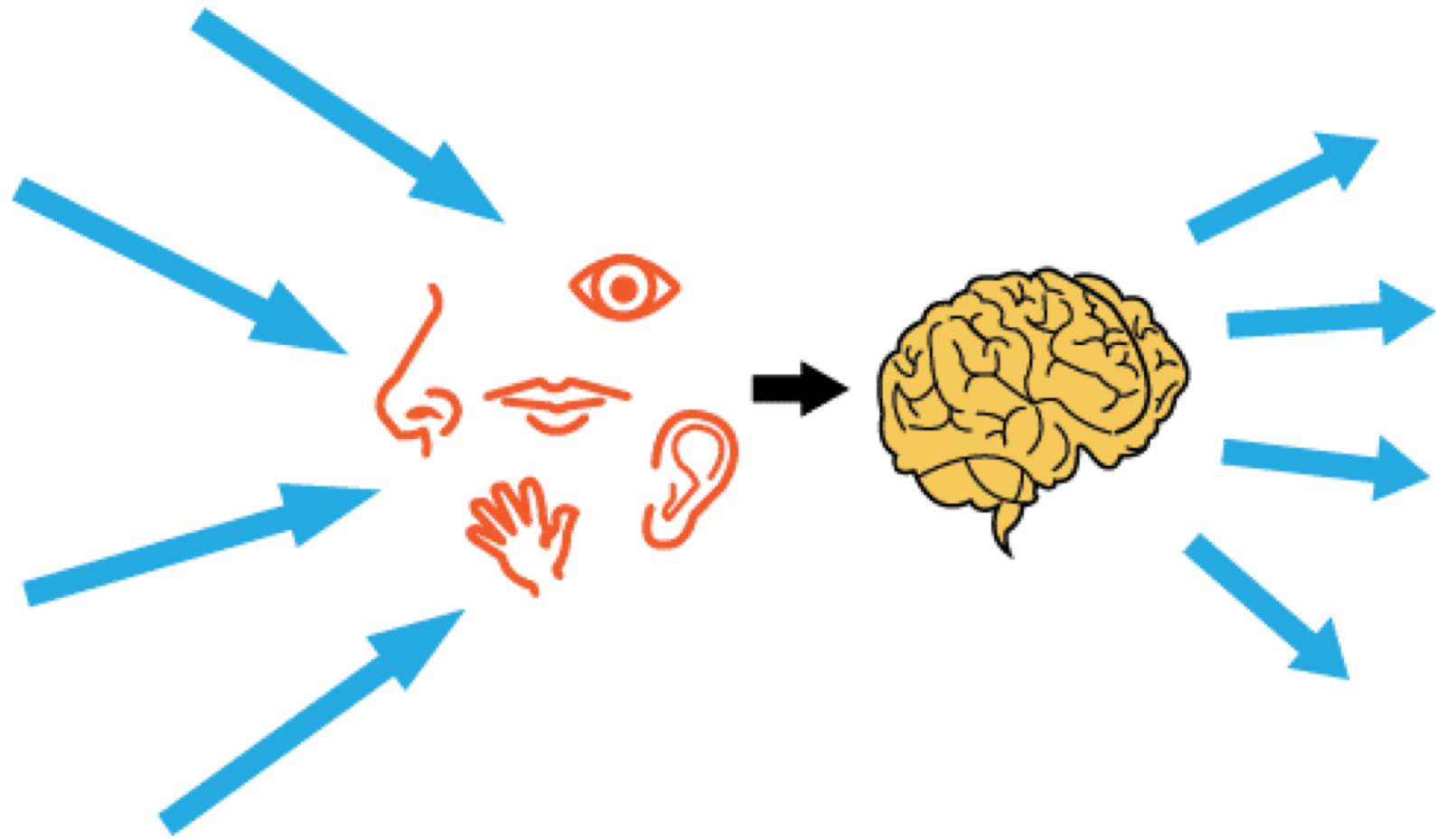
Tactile
(touch)



Proprioception
(body awareness)



Smith-Myles, B; Cook, KT; Miller, N; Rinner, L; and Robins L. (2000) *Asperger Syndrome and sensory issues: Practical solutions for making sense of the world*. Shawnee Mission, KS: Autism Asperger Publishing Company. Used with permission by Autism Asperger Publishing Company.



Sensory Input - Processing - Output/Response

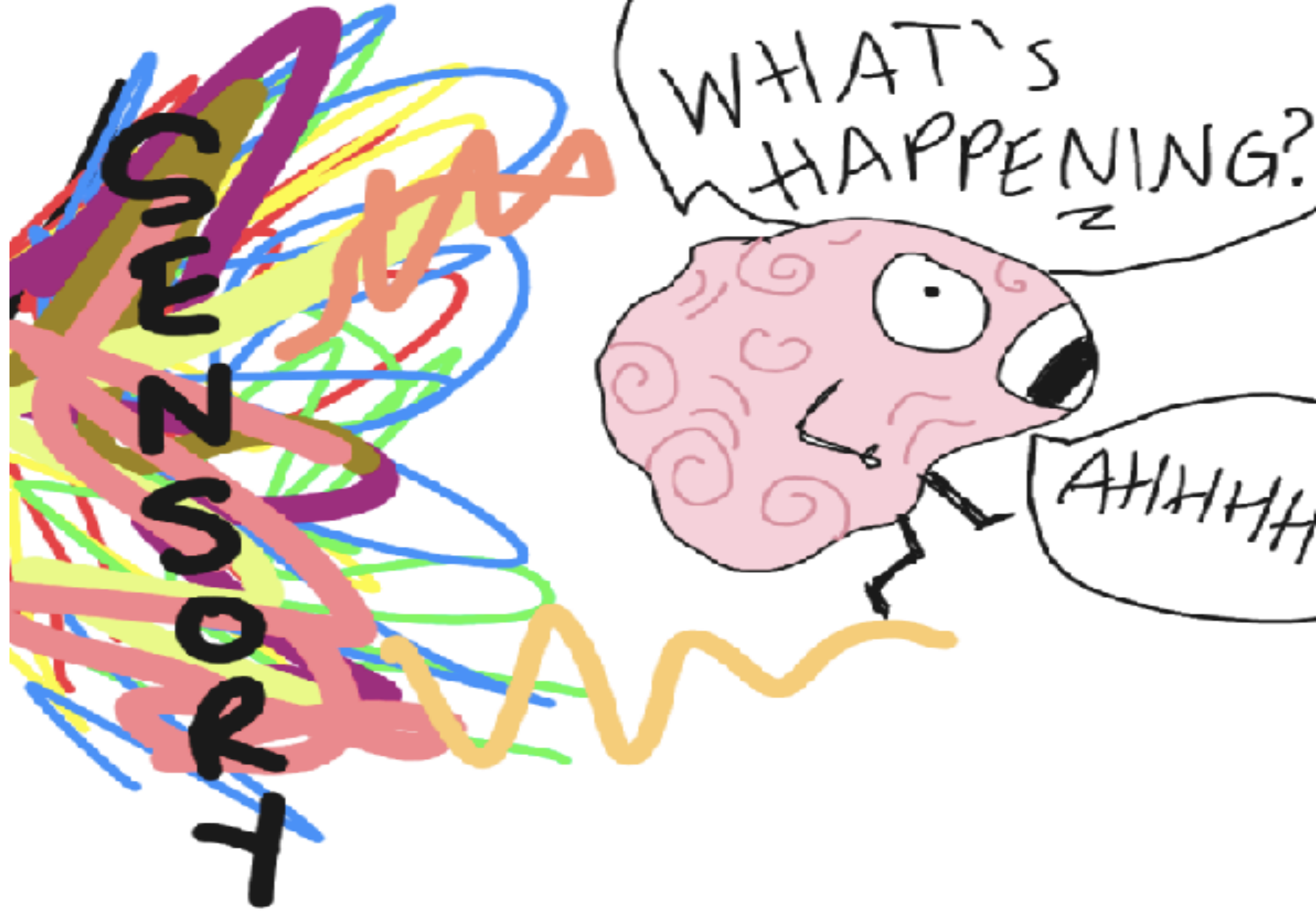


Sensory Processing

The ability to take in information from our senses, organise and interpret that information to make sense of it, then respond appropriately to that information.

Normal sensory processing allows us to respond to the sensory input we receive automatically, efficiently and comfortably.


When it goes wrong....





When it goes wrong...

People with sensory processing and integration difficulties can have difficulty with receiving sensory information, filtering it, habituating to it, organising it, adding meaning to it or responding appropriately to it.



Imagine if your sensory processing wasn't working right now... What would you be experiencing?

Distorted Sensory Processing Experiences

“What I do realise is that I do not see the world as others do...The fact that they can see, hear, smell, touch and relate to others is ‘normal’. For me, these things are often painfully overwhelming, non-existent or just confusing.” (Lawson)

“Light touch feels like a cattle prod” (Grandin)

“Smells like dogs, cats, deodorant and aftershave lotion are so strong to me I can't stand it, and perfume drives me nuts.” Gillingham, G. (1995)

“My ability to interpret what I saw was impaired because I took each fragment in without understanding its meaning ...I'd see the nostril but lose the concept of the nose, see the nose but lose the face, see the fingernail but lose the finger.” (Williams)

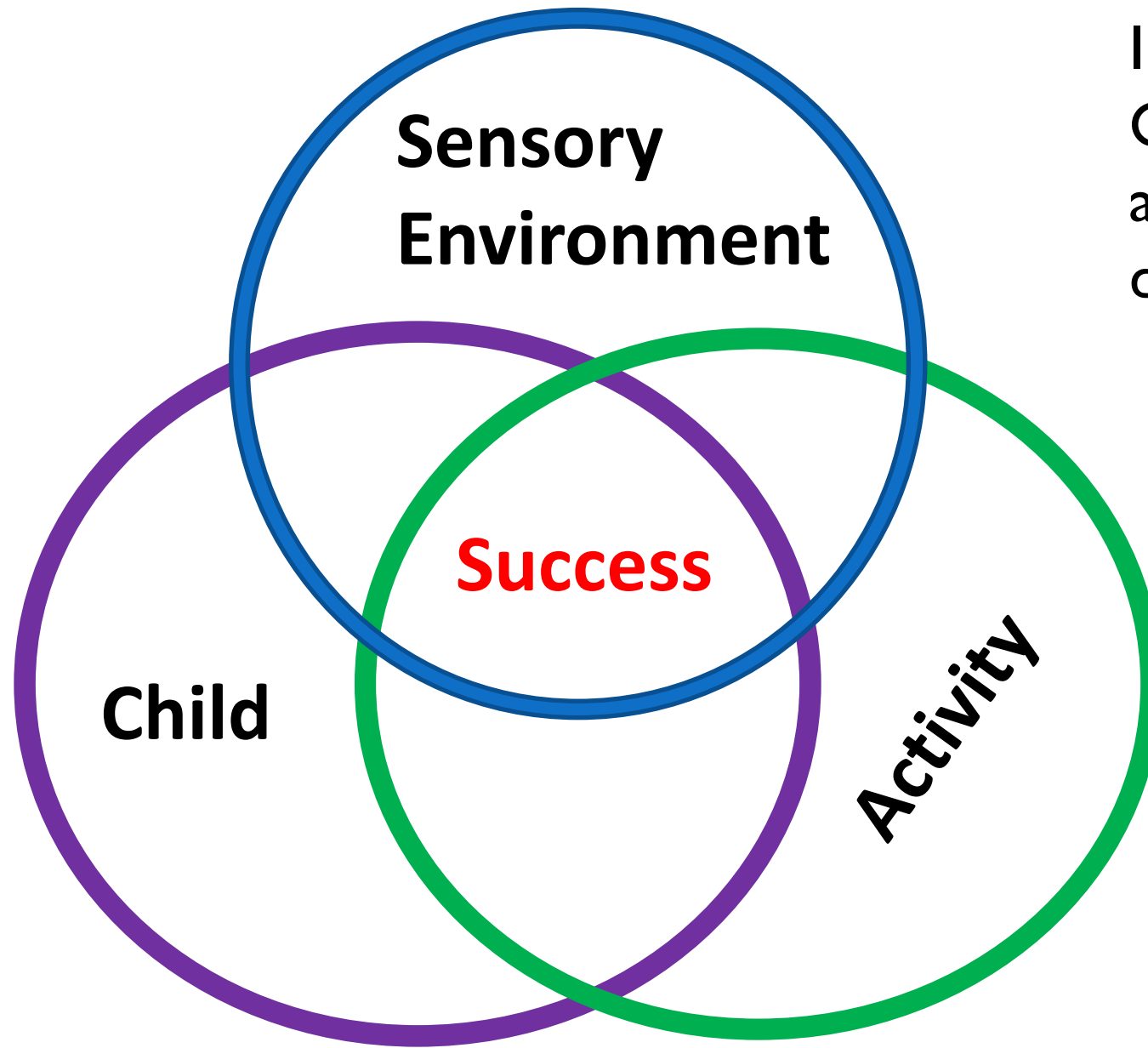
Sensory Processing Experience Video

https://www.youtube.com/watch?v=Lr4_dOorquQ



Sensory processing difficulties are real and can be very distressing

And different on a day to day, hour to hour basis depending on the interplay between the task demand (activity), environment and child's emotional state and ability to cope at that time.



Interplay between
Child, Environment
and Activity (task
demand)



Confusion 2: Sensory Processing Disorder (SPD)

Real “Disorder” or just differences?



Terminology.....

Sensory Processing Difficulties or Sensory Differences... Yes

But not SPD/Disorder.



HELPING CYP MANAGE THEIR SENSORY PROCESSING DIFFICULTIES

Treatment Approaches

- ➡ Ayres Sensory Integration Therapy
- ➡ Sensory-based Interventions

Medical model of disability

(Aims to fix the child/sensory difficulty)

Ayres Sensory Integration Therapy

Sensory integration therapy aims to help children with sensory processing issues by exposing them to sensory stimulation in a structured, repetitive way. The theory behind it is that over time, the brain will adapt and allow them to process and react to sensations more efficiently.

<https://www.youtube.com/watch?v=02JInqUhXeU>

Confusion 3: Ayres Sensory Integration Therapy works?

- Over 40 yrs. of research
- Systematic reviews continue to show weak or inconclusive evidence for the use of SI (Vargas & Carmilli 1999, Lang et al 2012, Barton et al 2015,)
- Host of International Organisations recommend **not using it or using on a research only basis.** (British Royal College of OT (2015), American Academy of Pediatrics (2012). National Standards Report 2009: National Autism Centre USA, Not mentioned in recommend in ASD NICE Guidelines UK)

Sensory Based Interventions

- Based on Ayres SI Theory
- Aims to provide individualised, controlled sensory experiences to help modulate the child's responses to environmental input (Baranek, 2002).
- These activities use a range of passive (e.g. wearing a weighted vest) to more active (e.g. jumping on a trampoline) activities to target hyper- or hypo-sensitivities.



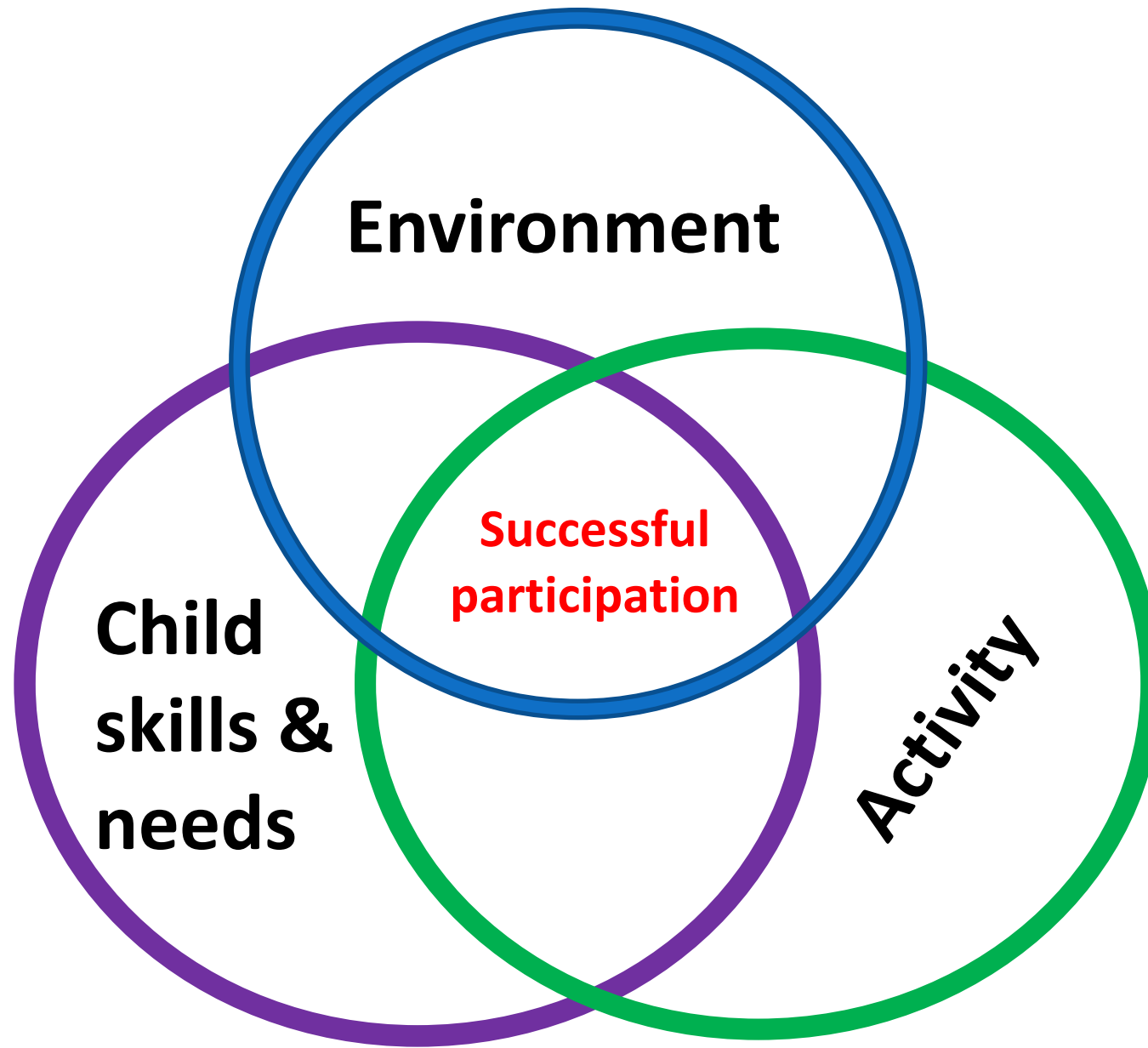
Confusion 4: Sensory Based Interventions work?

Limited/poor evidence base (Case-smith 2015, Barton et al 2015)

- Weighted vests: no impact on reducing problem behaviours or increasing participation (Stephenson & Carter 2009)
- Movement Breaks: some evidence for actual exercise
- Proprioception for calming??



 **SO WHAT CAN WE DO?**

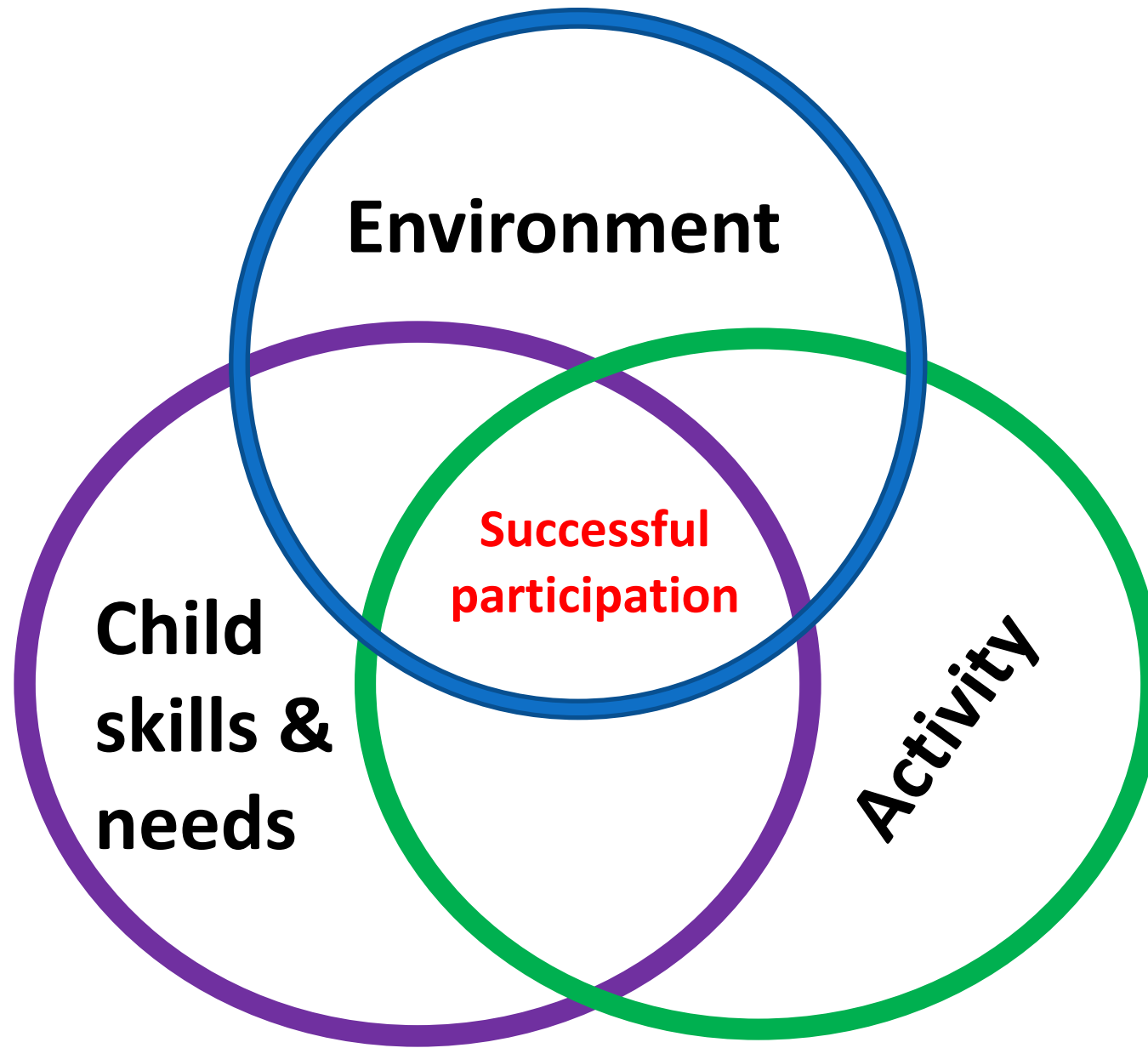


- RCOT Position:
Best Fit between
- Child/YP
 - Environment
 - Activity

Social Model of disability

Some basic strategies...

- Understand the distress is real.
- Plan ahead & prepare your child
- Lots of patience and time!
- Allow choice where possible
- Use your child's specialist interest to help
- Use External rewards (now/next)
- Pick your Battles: compromise but be consistent with set rules
- Encourage independence in the task



RCOT Position:
Best Fit between

- Child/YP
- Environment
- Activity



Managing the Sensory Environment

Spot the difference.....

BEFORE



AFTER



Adapting the Sensory Environment

- Adapting your home environment to fit with your child's/YP sensory needs
 - Low lighting
 - Low arousal wall colours
 - Use of non-scented cleaning products
 - Soft furnishing (reduces noise)
 - Play relaxing background music, ticking clocks in rooms

<https://www.autism.org.uk/about/family-life/in-the-home/environment.aspx>

Where is the most appropriate environment for the child to do the activity?

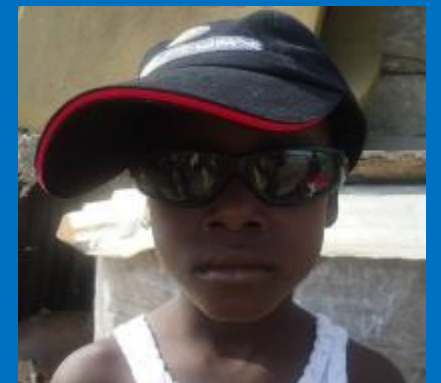
Adapting the Activity

- Task demand
- Does the CYP really need to do the activity?
- Can the activity be done differently to accommodate child's needs?
- Break the task into small steps: build on steps slowly
- CYP helps do the activity: Control!!
- How is the activity communicated?
- How do they know how long the activity will last?



Adaptations for the child/YP

- Sensitivity to noise: Ear defenders or hoodies, headphones with white noise/classical music
- Sensitivity to light: Sun glasses & Hats
- Mouthing: Substitute with chewlery
- Sensitive to materials: adapted clothing without seams etc



Other Strategies

- Graded exposure (e.g. IPad video of dryer in WC)
- Reward charts (e.g. wearing shoes outside)
- Social awareness training: tip toe walking
- Social (sensory) stories: (e.g. Going out in the rain
<http://www.easytolovebut.com/?p=455>)

TO END.....



Key Points

- Sensory Processing difficulties are real and can be distressing
- No quick fix! Takes time but can improve.
- Managing difficulties needs a combined approach and will be different in different situations

* Consider changes to the environment, changes to the activity and supports for the CYP *



Thank You for
listening

Any Questions??

References available upon request

ASD DSM-V

- B. Restricted, repetitive patterns of behaviour, interests, or activities, as manifested the following
1. **Stereotyped or repetitive motor movements**, use of objects, or speech (e.g., simple motor stereotypies, lining up toys or flipping objects, echolalia, idiosyncratic phrases)
 3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interest).
 4. **Hyper- or hypo-reactivity to sensory input or unusual interests in sensory aspects of the environment** (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

What are our expectations on changing sensory difficulties if they are diagnostic features?

I.e. part of the condition