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Sensory Processing in People with Autism

Making Therapeutic Sense

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Helping people to be
the best they can be

Sensory Input

We take in sensory information using our seven senses:

- Sight
- Smell
- Hearing
- Taste
- Touch
- Vestibular
- Proprioception

What is sensory processing?

- The neurological process of organising the information we receive from our bodies and from the environment for use in daily life
- It is where the brain gives meaning to sensory input and enables us to formulate a plan of action
- Occurs on a subconscious level and develops throughout childhood

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What is sensory processing? (cont)

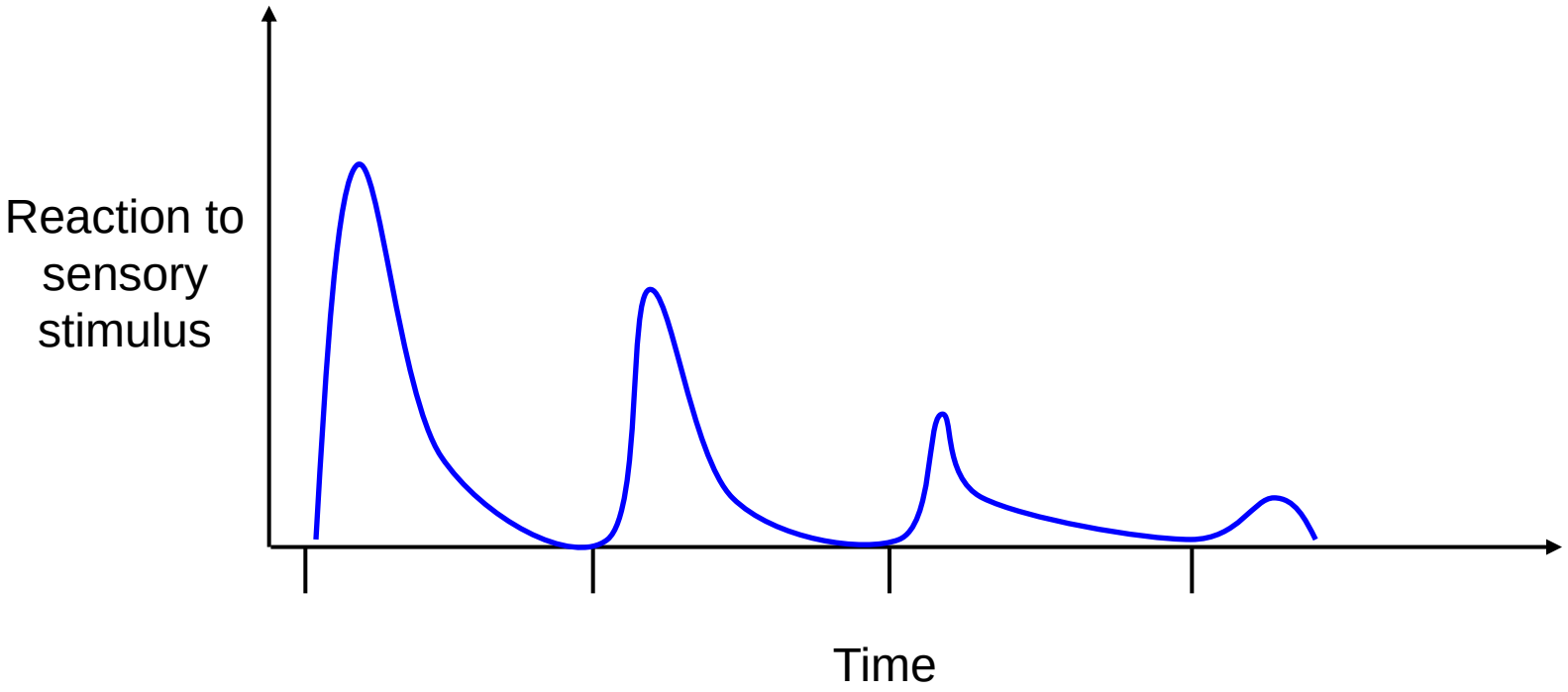
Registration: noticing sensory stimuli

Discrimination: recognising the features and details of stimuli

Interpretation: applying meaning and past experience (including emotional memories)

Modulation: adjusting and organising reactions to stimuli

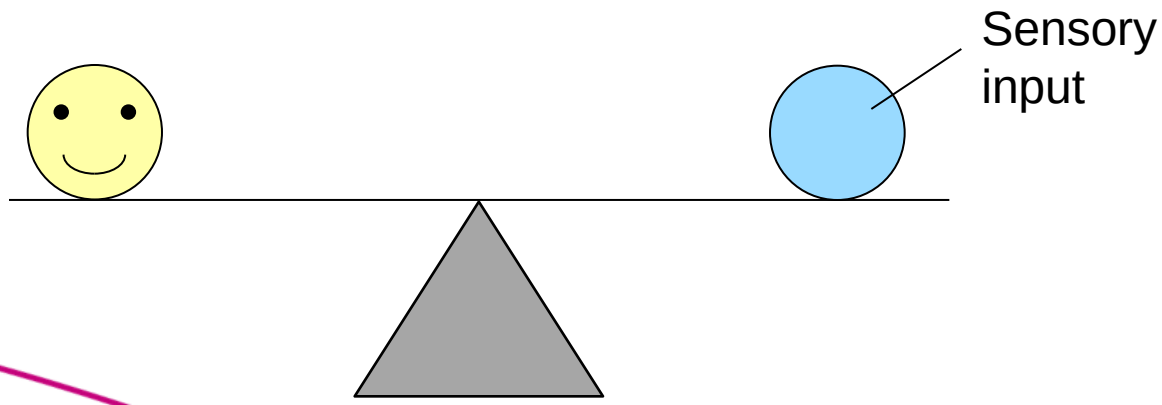
Habituation



We all process information differently…

Sensory thresholds

- We all have different sensory preferences and thresholds
- Most people have the correct balance of sensory input to allow them to function throughout the day and feel **“just right”**



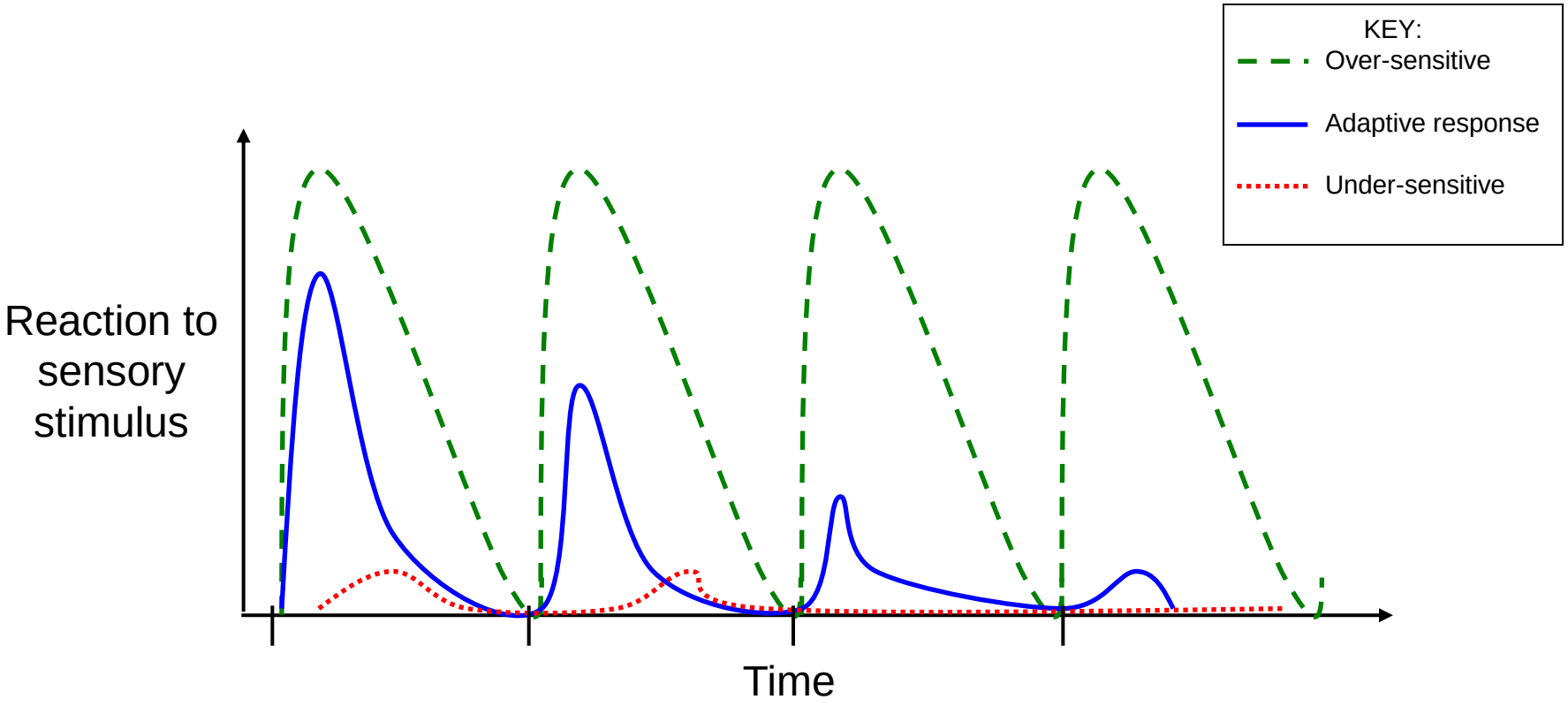
Sensory Processing Disorder

- Occurs when a person has problems organising sensory information:
    - The brain cannot **register, discriminate** and/or **modulate** sensory information effectively
- Can affect any of the seven senses
- Can be **over-** or **under-sensitive** to stimuli, or both
- Often displayed through behaviour

Sensory Processing Disorder (cont)

- Sensory information may be distorted
- An individual may experience sensory overload
- May have a reduced ability to cope with sensory input if already over aroused
- An individual's sensory threshold can vary throughout the day

Habituation



When are sensory processing difficulties a problem?

A person with sensory processing difficulties may get **too much / not enough** stimulation

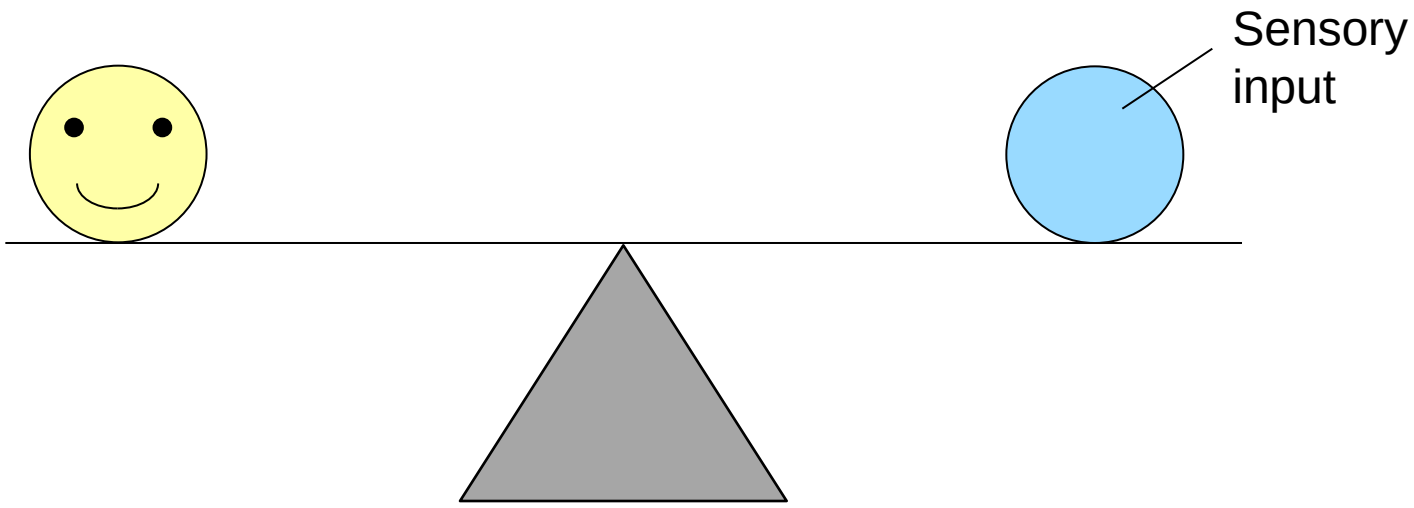
- Too much stimulation may result in **sensory avoiding** behaviours
- Not enough stimulation may result in **sensory seeking** behaviours

These behaviours become a problem when they interfere with daily life

Behaviour indicators

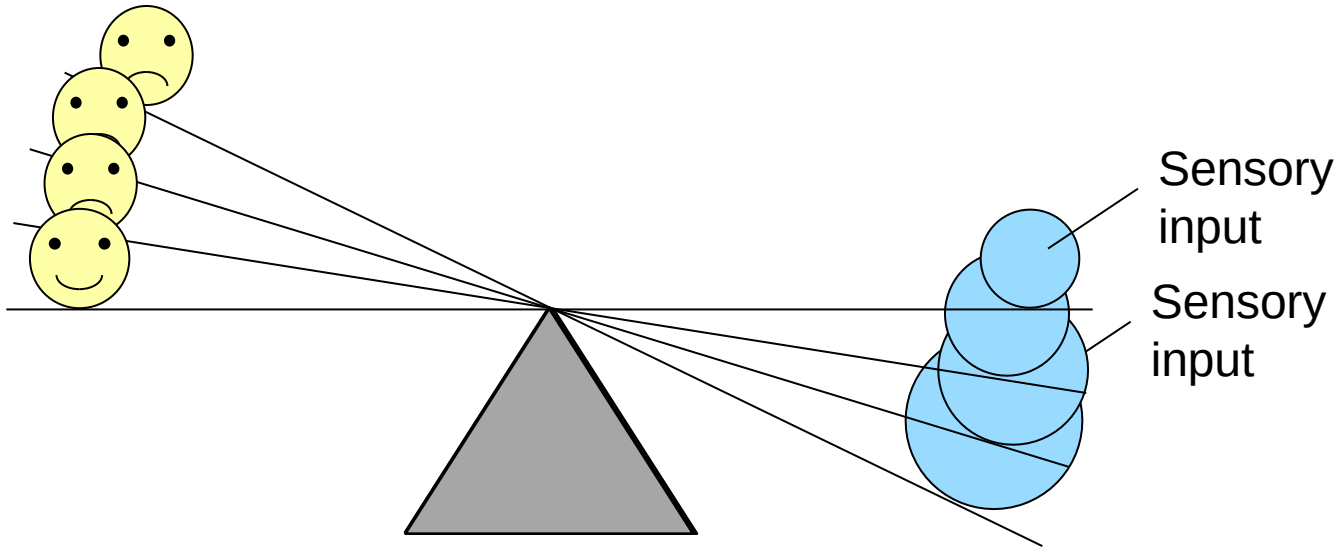
Over-sensitivity (sensory avoiding)	Under-sensitivity (sensory seeking)
Inappropriate response to touch, movement, sight, sound Withdrawn / isolated Aggression towards others Signs of distress Sensory avoiding behaviours Fight / flight Self-calming behaviours, e.g. rocking Easily distracted	Does not notice when touched Self-injurious behaviour Self-stimulation, e.g. spinning, running, head banging, rocking Aggression towards others (often resulting in restraint) Unusually high activity levels; seeks out sensory experiences Dormancy Accident prone

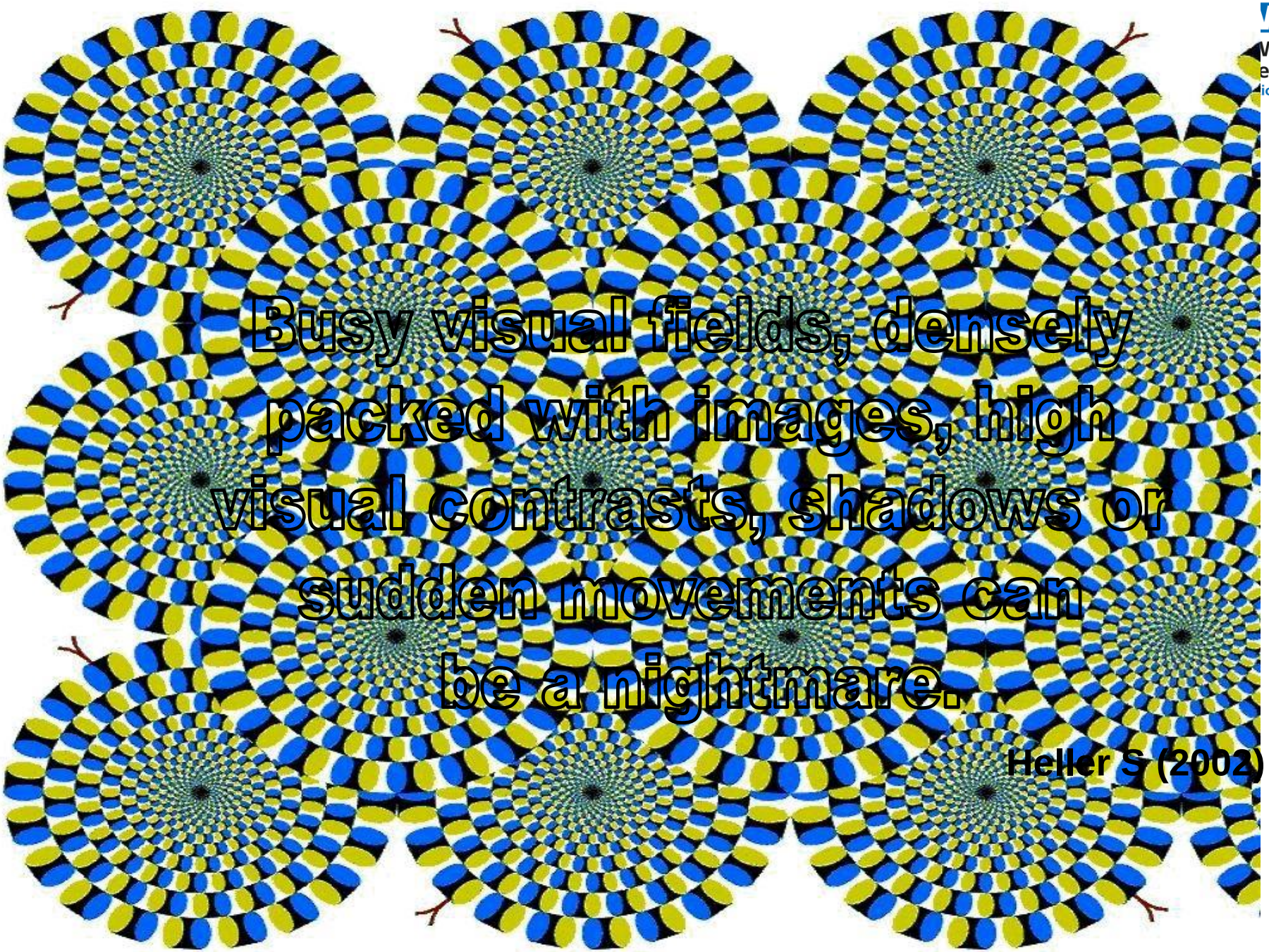
“Just right” levels of stimulation



Sensory avoiding

- Low neurological threshold; over-sensitive
- May result in over-stimulation and sensory avoiding behaviours



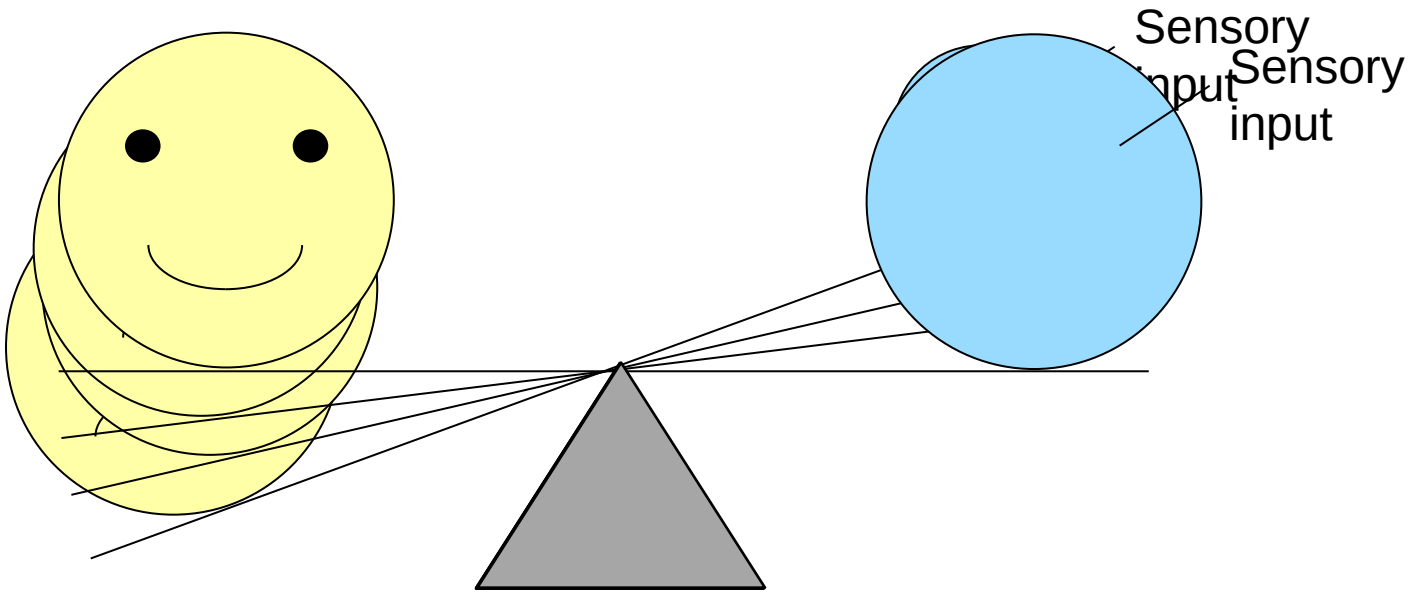


Busy visual fields, densely packed with images, high visual contrasts, shadows or sudden movements can be a nightmare.

Heller S (2002)

Sensory seeking

- High neurological threshold
- May result in under-stimulation and sensory seeking behaviours



Assessment

- Must be carried out by professional with post-graduate training in sensory processing
- Usually an OT but could be Speech and Language Therapist / Physiotherapist
- Involves information gathering, use of assessment tools, observational assessment and interpretation of behaviours

Formulation

Identified Behaviours	Senses	Interpretation

Strategies

Therapists can identify an individual plan based on the person's specific needs and likes:

- **Day-to-day activities / Sensory diet** (that provide the right sensation)
- **Adapting the environment**

Activities / Sensory diet

It is important that the person with sensory processing difficulties remains in control as much as possible

Our job is to help the person find effective ways of receiving the amount of stimulation they need:

- **Sensory "top-ups"** – if individual is under-stimulated
- **Calming activities** – if individual is over-stimulated

Environment

- Modification of the environment to control levels of sensory stimuli
- Based on the individual's sensory needs and activities they want / need to do within that specific environment
- Consider how all seven senses are stimulated by the environment

Summary

- A sensory processing approach can improve functioning and reduce need for alternative management techniques (e.g. medication, restraint) in people with a sensory processing disorder
- Is not always the most appropriate approach for all individuals, but is another tool in the toolbox

Any questions?

References

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Further reading

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