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## Introduction to Sensory Processing

- Human beings require a certain amount of sensory stimulation to foster brain development and function
- Irregular sensory processing may cause a person to exhibit unusual behaviours

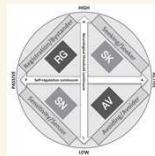
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## Introduction to Dunn's sensory processing framework

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## Dunn's model of sensory processing

**Neurological Threshold Continuum**

HIGH threshold (habituation)

LOW threshold (sensitisation)

**Behavioural Response Continuum**

PASSIVE ← → ACTIVE

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## What is Sensory Processing?

Sensory processing is the ability to organise and interpret information received through the senses:

Auditory	Vestibular
Visual	Proprioceptive
Tactile	
Olfactory / Gustatory	

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## Dunn's model of sensory processing

**Neurological threshold:** the amount of stimuli required for a neuron or neuron system to respond

**Behavioural response:** the way a person acts in consideration of his/her neurological threshold

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## Thresholds for response



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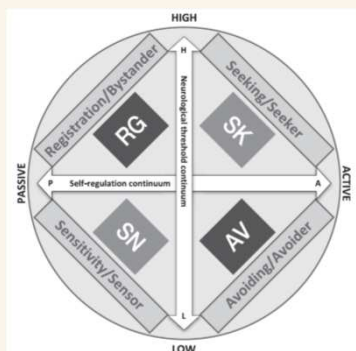
## The Sensory Profile family

- Adolescent / Adult Sensory Profile (2002)
- Sensory Profile 2 (2014)
  - Infant (0-6 months)
  - Toddler (7-36 months)
  - Child (3:0-14:11 years)
  - Short (3:0-14:11 years)
  - School (3:0-14:11 years)

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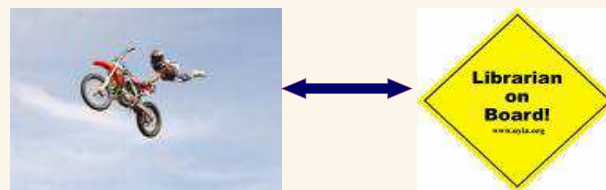
## Dunn's sensory processing framework



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## Everyone has a Sensory Profile!



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## Dunn's sensory processing framework

- **Seeking** – the degree to which a person *obtains* sensory input
- **Avoiding** – the degree to which a person is *bothered* by sensory input
- **Sensitivity** – the degree to which a person *detects* sensory input
- **Registration** – the degree to which a person *misses* sensory input

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## Everyone has a Sensory Profile!

- "Sensory processing" is a concept that explains how we experience life through our senses
- The Sensory Profile helps to identify sensory *preferences* rather than a sensory disability or disorder
- 'More than others' or 'Less than others' scores alone do not indicate the presence of a functional problem

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### Registration Quadrant

- High neurological thresholds
- Passive
- 'Miss' sensory information
- Easygoing



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### Avoiding Quadrant

- Low neurological thresholds
- Active
- Withdraws from overwhelming sensory input
- Likes order and routine



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### Seeking Quadrant

- High neurological thresholds
- Active
- Continually adding sensory input to tasks
- Likes to be busy



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### Interpretation of Quadrants

- Quadrant scores are independent of one another *not* part of one continuum
- Each quadrant has its own continuum
- Every person has some aspects of each quadrant in his/her individual sensory processing pattern

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### Sensitivity Quadrant

- Low neurological thresholds
- Passive
- Continually detecting sensory input
- Heightened awareness



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### Interpretation of Quadrants

**Registration** - the degree to which a person *misses* sensory input

Less than others	Just like majority	More than others
Notices input that is not helpful for participation	Notices enough input to support participation	May miss sensory input needed for participation

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### Interpretation of Quadrants

**Seeking** - the degree to which a person *obtains* sensory input

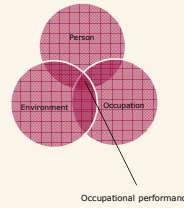
Less than others	Just like majority	More than others
May not seek input, shows reduced interest and motivation in sensory activities	Uses sensory input to gather information needed for participation	May seek input in ways so excessive that participation is compromised

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### Making it all about occupational performance

Person-Environment-Occupation Model



'Occupational performance is the product of the dynamic relationship among persons, their occupations and roles and the environments in which they live' (Law et al, 1996)

Law, M., Cooper, B., Strong, S., Stewart, D., Rigby, P. & Letts, L. 1996. The Person-Environment-Occupation Model: A transactive approach to occupational performance. *Canadian Journal of Occupational Therapy*. 63(1):9-23.

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### Interpretation of Quadrants

**Sensitivity** - the degree to which a person *detects* sensory input

Less than others	Just like majority	More than others
Fails to detect details	Detects enough input to enable participation	May be so distracted by input that participation is disrupted

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### Conclusion

- Sensory processing is a fundamental part of being human
- Every person has a Sensory Profile
- There is no 'right' or 'wrong' Sensory Profile
- Dunn's sensory processing framework describes a person's sensory preferences and patterns of behaviour
- Thinking about sensory processing helps us to gain a more wholistic view of people we work with

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### Interpretation of Quadrants

**Avoiding** - the degree to which a person is *bothered* by sensory input

Less than others	Just like majority	More than others
May fail to limit input despite over-stimulation	Obtains and tolerates sufficient input to enable participation	May be so overwhelmed by input that participation is compromised

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