Insights about Sensory Processing in everyday life:
What do we know now and what must we do about it?

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Use of the Bell Curve [Frances, 2013 *Saving Normal*]

Core Concepts

- Diversity in characteristics is healthy
- Adaptability is possible for everyone
- Differences do not mean dysfunction
- EVERYONE has the right to be self-determined

PREVALENCE OF SENSORY PROCESSING PATTERNS IN THE GENERAL POPULATION

Illustration of the distribution of sensory processing pattern scores. Bars represent percentages of each sample; raw numbers are added above some bars. (Dunn, Little, Dean, in process)

SCOPING REVIEW

SENSORY PROCESSING AND PARTICIPATION

Related to school participation

Auditory and visual processing was most often studied at school and does have a strong association with reading performance.

Children with dyslexia recognize the noise better than the speech sounds which suggests that there are some sensory filtering factors that we might consider and supporting them.

And for children with autism,

modulation, auditory filtering and touch were associated with inattention at school.

In a study looking at sensory processing at school and home together researchers found

Moderate correlations between home and school sensory patterns

which suggests that in these two important context for children

there are both universal truths and context specific truths when looking at sensory processing behaviors.

Related to daily life

Children with sensitivity to taste and smell reject fruits & vegetables

Other children’s profiles align with parents: touch sensitivity and unfamiliarity are not a factor

Lower proprioception is related to sedentary play

Children with ADHD and ASD have fewer play choices

For FASD sensory processing differences associated with adaptive behavior

For ASD/ADHD: low thresholds associated with less autonomy in self-care

Low registration is associated with less involvement in self-care/daily living

Lower thresholds are associated with lower competence

Children with ADHD + differences in sensory processing have no differences in participation

Children with ASD + differences in sensory processing have lower participation.
Sensory processing informs incontinence interventions

Children with FASD who have sensitivity sleep shorter amounts of time

Children with FASD who have seeking sleep less

Children with FASD who have avoiding wake up more

Social Participation

Children have the same levels of enjoyment with family and small groups of friends even when sensory processing is different

Children in the general population who have sensitivities have differences in social interactions

Coaching interventions increase parental competence; they then need less support

Other Traits

Adolescents with DCD use more visual cues, less proprioceptive cues

Sensory stimulation has no effect on motor development of infants

When parents have more information about movement, their children have better oral, self care, mobility

There is a relationship between repetitive/ SIB & stereotypies and patterns of sensory processing

Anxiety predicts under-responsivity

ODD predicts over-responsivity

Low threshold sensory patterns are associated with anxiety, shyness, low self-regulation, negative affect, challenging behaviors

Registration sensory patterns are associated with withdrawal, negative mood, adaptability, persistence, and activity levels

Children can separate perceptual information and therefore detect more sensory input than adults

When children have a combination of low registration and touch sensitivity they have more challenges understanding emotions

Interventions

Effectiveness of sensory based approaches

A few showed effectiveness

Many show NOT effective

Sensory based interventions have not been successful at consistently changing repetitive behavior patterns

Equal outcomes to alternative interventions

Different outcomes for comparison groups
Variable outcomes across the study
Promising new ideas

**IMBEDDING IDEAS INTO ROUTINES IS EFFECTIVE**

Coaching with sensory processing info supports increases parental competence and children’s participation
Parents want information for everyday life
Tele-health was effective

**Summary statements re: interventions**

Dosage was quite variable [1 session to months]
Developmental trajectory not considered
Outcomes varied [motor to play to parental competence]
Details about interventions not always available
Alignment of interventions and outcomes variable
What are clinically meaningful differences?