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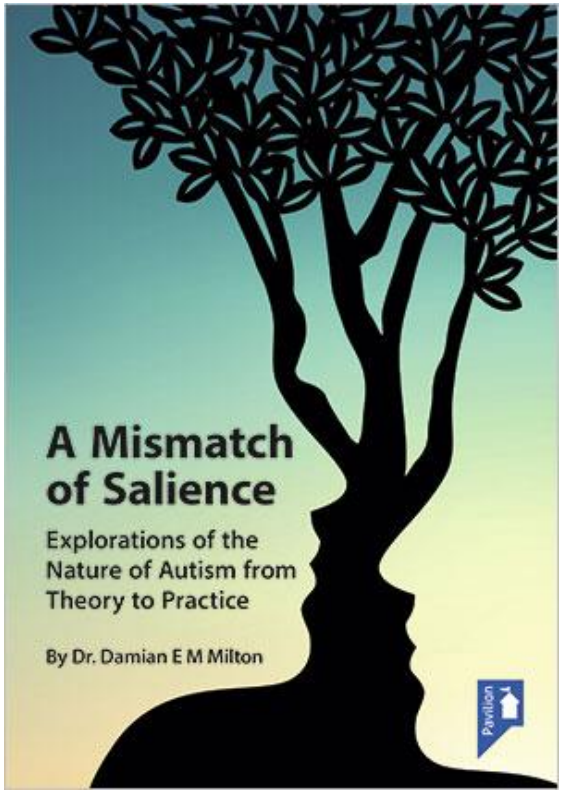
Current issues in supporting the sensory needs of autistic people

Dr. Damian E M Milton



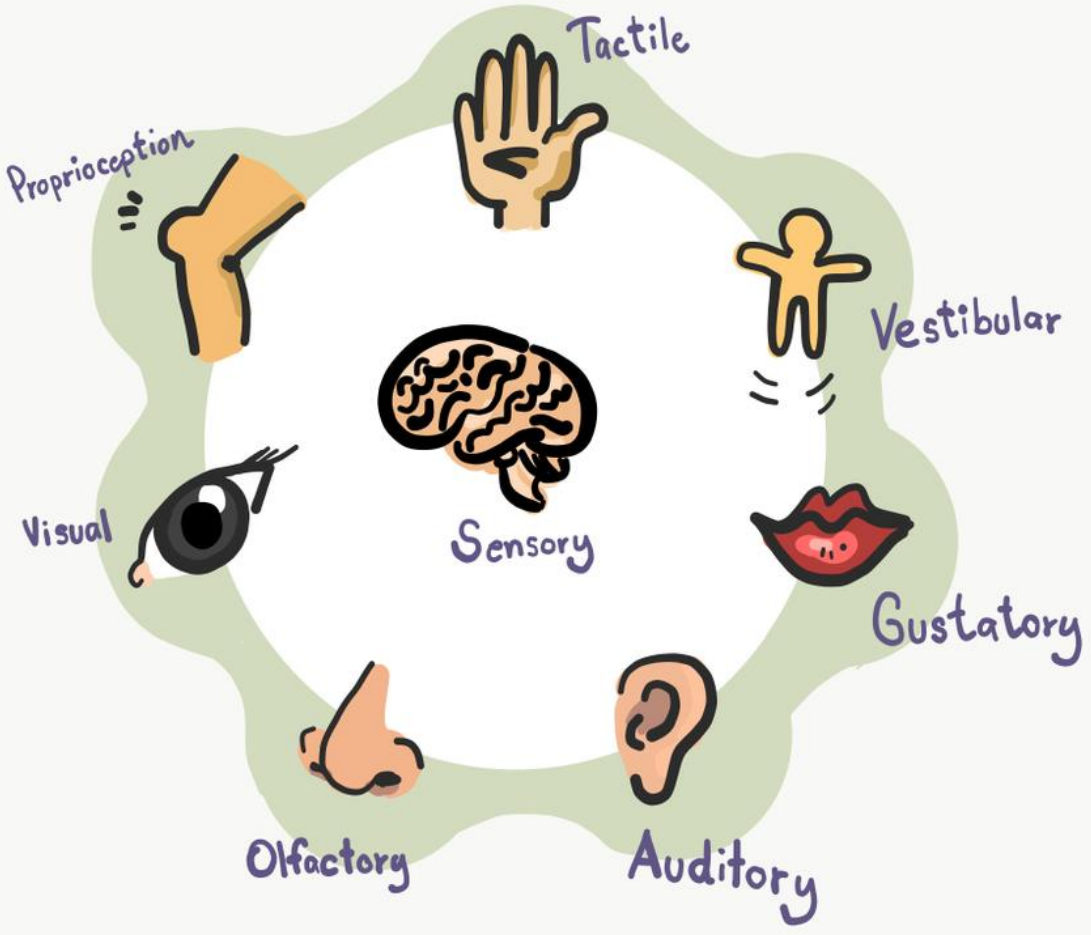
Introduction

- This talk examines how the sensory needs of autistic people are currently assessed, including a critique of such assessments, alongside and exploration of support strategies that can be employed to help autistic people such as the low-arousal approach and universal design.

Insider knowledge

- “...right from the start, from the time someone came up with the word ‘autism’, the condition has been judged from the outside, by its appearances, and not from the inside according to how it is experienced.” (Williams, 1996: 14).

Sensory input



Hypo and hyper sensitivities

- Decreased or increased sensitivity (compared to the ‘norm’).
- Across senses.
- Differing patterns relating to each person, context, and experience (and thus predictability).
- Context and motivation.
- Examples: Loud voice / ear defending.
- Hyperacusis / misaphonia.

Stressful / comforting stimuli?

An ‘interest model’ of autism

- Autism and monotropism.
- Attention as a scarce resource.
- Monotropic attention strategies and the ‘attention tunnel’.
- Monotropism, repetitive behaviour and interests, and ‘flow states’.

Synaesthesia and sensory integration

- The production of a sense impression relating to one sense or part of the body by stimulation of another sense or part of the body.
- Sensory integration and sensory fragmentation.
- Integration and predictability.
- Structure and routine – but to suit whose needs?
- ‘Spiky profiles’ of interest and avoidance.

Deficit model framing of sensory issues

- Sensory Processing Dysfunction (SPD) or Sensory Modulation Disorder (SMD) and dominated by the medical model and deficit discourse.
- Assessment checklists are based on different theoretical models, the differences between which can be reflected in different questions asked by each one. In most cases these assessments also require training in order to be used.

Four quadrant model

- Dunn's assessment tools are based on her Four Quadrant Model of Sensory Processing (Dunn, 1997). According to this framework an individual's reaction to sensory events reflects their neurological threshold and their observable behavioural response.
- Both constructs are described in this model on a continuum from high to low.

- Individuals with low sensory threshold may be quick to notice and respond to stimuli whist on the contrary, individuals with a high threshold may miss stimuli that others respond to.
- Individuals also have active or passive strategies in response to their environment. Individuals with passive tendencies might not take action to change their environment, whereas those with active tendencies might try to control the type and amount of sensory input in their environments.

- 1. Registration represents a combination of high neural threshold and a passive regulation strategy, suggesting that people in this category do not notice sensory events that others easily do.
- 2. Sensation seeking represents a pattern of high threshold and active responding strategy. People in this category enjoy and extend their sensory experiences.
- 3. Sensory sensitivity represents a low threshold and passive responding strategy. People notice more sensory events than others usually do but take a passive stance.
- 4. Sensation avoiding represents a low threshold and an active self-regulation strategy. It is suggested that people in this category tend to withdraw from situations very quickly.

- Based on the assessment individuals are allocated to sensory processing preference, which is conceived of as a stable trait.
- However, none of these subcategories are autism specific and autistic people may experience reactions in all four of these quadrants depending on context. The autobiographical accounts of autistic people suggest that their sensory experiences are much more complex and likely do not fit into Dunn's subcategories.

Desensitisation?

- Dunn (2007) emphasised that sensory interventions should be adapted to the individuals' natural environment and everyday routine in order to help them participate in everyday life. The knowledge gained from the sensory assessment tool should help create a more sensory-friendly environment.
- However, it is also recommended that gradual exposures be implemented on individuals. This suggests that an effort is being made to remediate dysfunction and underlying nervous system issues.

Sensory integration theory

- Within the field of occupational therapy, Ayres's (1972) theory has been the most eminent in relation to sensory experiences. According to this framework sensory issues were linked to abnormal brain functioning.
- According to Ayres's, autistic people had difficulties registering and modulating to a sensory stimulus. Furthermore, she suggested that they have motivational deficits. She concluded that reduced ability to integrate sensations might negatively affect development and learning.

- The basic goal is to improve sensory modulations that are believed to be associated to a specific behaviour and ultimately increase the individual's ability to process sensory stimuli in the environment.
- Thus, it is the autistic's responsibility to modify their behaviour and increase their self-efficiency in order to accommodate non-autistic people's perception of how one should act.
- Pfeifer et al., (2011) highlight the aim of integration therapy is to decrease autistic mannerisms so that autistic people can be 'accepted' by mainstream society.

Sensory diets

- Sensory diets are also based on Ayres's framework (Wilbarger, 1995). A sensory diet provides controlled sensory input during the day to achieve 'optimal' levels of arousal and promote typical development and improve occupational performance in the context of daily living.
- This intervention also aims for the individual to meet environmental demands in order to attain social participation. Although sensory needs are tailored to each individual they too aim to change the individual, and desensitise them.

Bogdashina's Sensory Profile Checklist Revised (SPCR) (2003)

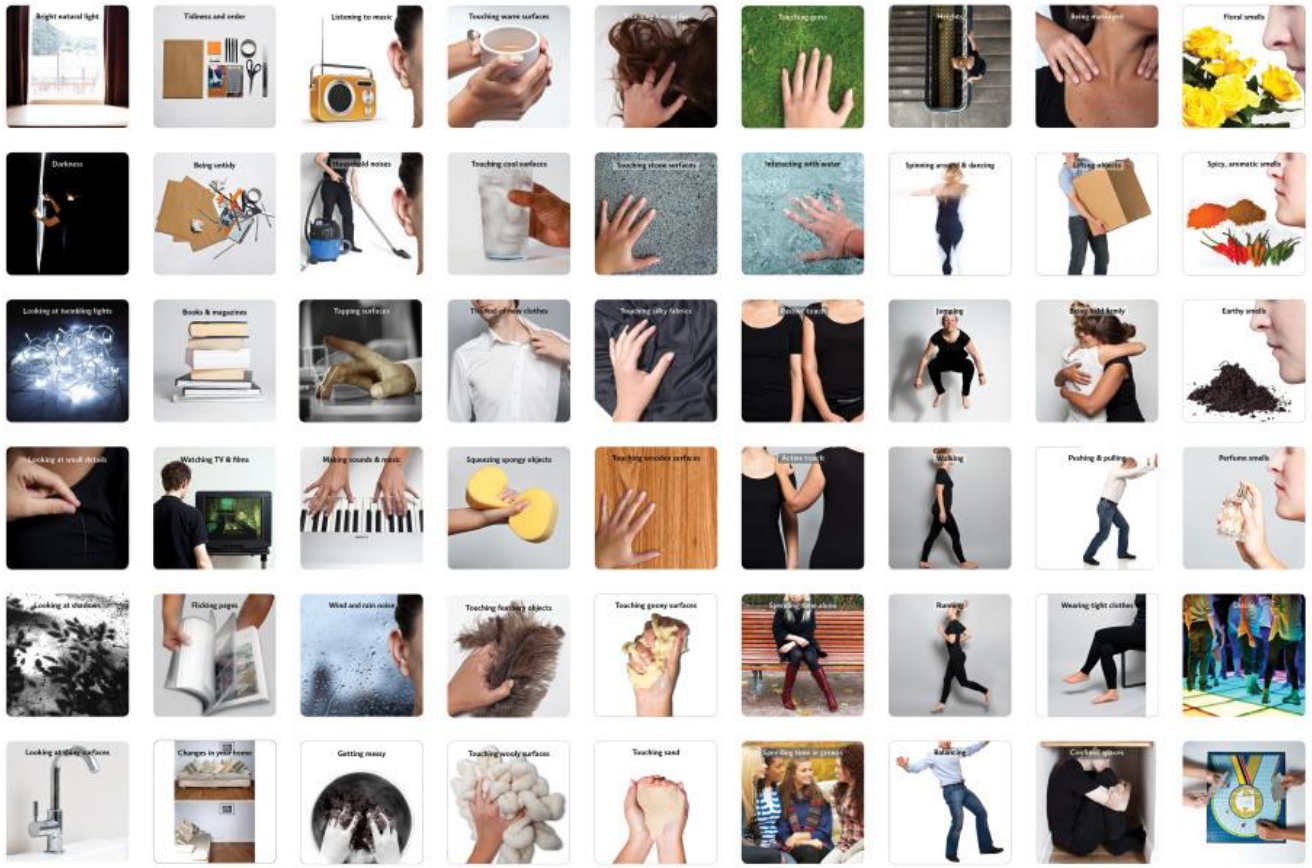
- Based on personal accounts of autistic people and close observation of autistic children.
- It is designed to profile sensory weaknesses but also "superabilities".
- It also aims to identify the strategies that the individual had to develop to cope with sensory differences.
- Not a standardised assessment, yet a refined version is supported by the Autism Education Trust and the Department for Education (Autism Education Trust, 2012).
- Although this assessment is developed for this specific population it does not provide guidance on how the information gathered by the assessment tool can be used in practice.

Criticisms of current practice

- Most of the assessments rely on proxy reports about the internal state of the individual being assessed.
- Differences in sensory processing may not necessarily be correctly evaluated by clinical tests and questionnaires that are not tailor-made for the autistic population.
- New measures and strategies have not developed in recent years although advances have been made in understanding sensory issues in relation to autism (Remington and Fairnie, 2017).

- Although there is a plethora of studies examining sensory issues in autistic people, only a limited number of them are linked to practical implications.

Sensory cards (Brand et al. 2012)



Our current project

- Influence of the ‘Sensory School’ project (Martin et al. 2019).
- Emphasis of adjusting environments and building communities of practice.
- Impact of Covid-19.
- Refined sensory checklist and mapping to environment.
- Initial findings from questionnaires.

Intensive interaction

- A relationship-based model which seeks to make functional gains in communication.
- However, the focus here is primarily building trust and rapport on the child's own terms.
- Following a person's interests and learning their 'language' and centres sensory needs.
- Phoebe Caldwell – moving beyond initial model in her practice.

SPELL framework: Very brief summary

	Structure	Positive approaches and expectations	Empathy	Low arousal	Links
What ?	-Reducing anxiety through increased predictability	-Play to strengths -Assume 'can do' - but with help	Mutual understanding of perspective of others	-Recognise stress caused by sensory differences -Confrontation	-Promote consistency -Promote involvement
Underlying Difficulties ?	-Organising, sequencing and planning – self monitoring	-Uneven skill development -Low or imposed expectations	-Mutual understanding / misunderstanding of other minds -Judgement of social situations -Literal interpretation	-Sensory processing -Stress -High anxiety	-Uneven processing of information - Detail v bigger picture -Response to change
Some examples	-Written or pictorial timetables/ instructions/ Diaries -Clear sequencing	-Positive /direct clear language -Use strengths and interests as motivators and to build confidence	-Reflection – Discussion -Pictorial aids -'Social stories' -Keep promises	-Audit sensory environment -Reduce noise/ clutter -Reduce confrontation	-Inclusive meetings - Access to 'mainstream' facilities - Consistent

Universal design

- “Universal design is the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design.”
- In order to make design, whether bespoke or universal in orientation, one must endeavour to understand the needs of autistic people.

Concluding remarks

- Understanding of differing dispositions, and building of relationships in a respectful manner, engaging with an individual's abilities and interests and not just what they find difficult.
- Is this not how many people, whatever their disposition would like to be treated?

Five key points

- **Respect** the autistic way of being, work with it not against it.
- Always consider **sensory issues.**
- Always consider how you process **information** may be very different to that of the person in your care (utilise interests).
- **Stress** is a key issue – reduce input when people are over stressed.
- **Collaborate** for consistency in approach.

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