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+

09 Member profiles

12 Dyslexia: the debate revisited

24 Let's embrace technology!

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Inside: Assessment tests under review

25 ANNIVERSARY

And **50 years** of Dyslexia Review, our double anniversary year

Sensory equipment in the classroom

Kim Griffin, Occupational Therapist, discusses how sensory equipment can be used in therapeutic interventions with children in the classroom.

Summary

This article considers three common pieces of sensory equipment that you might see in a classroom and discusses why you might use them with specific children. We also discuss sensory movement breaks.

Wobble cushions

- These are plastic air-filled cushions designed to create an unstable surface that provides some movement when sat on.
- The idea behind this type of equipment is to target the vestibular system, or balance sense. Movement is processed by the vestibular sense and can help to keep us alert.
- These cushions can be helpful for children that are constantly moving about, fidgeting and maybe rocking in their chair. It is hypothesised that these children use their movements to help to stay alert.
- The cushion can provide a more appropriate and less distracting way for them to receive movement whilst sitting in their chair.
- A child who is slumped in their chair and appears to have low energy may also find a cushion helpful as it might help to 'wake up' their vestibular system.
- Sitting on a sensory cushion is not a sensation that all people like. Also, some children with poor core stability and balance might find the cushions very difficult to sit on because the cushion is unstable and therefore harder to maintain a seated posture on.
- Each child will have individual behaviours that you may want to target by using the cushion. Make sure you set targets that you want to achieve before testing the cushion. Do a pre- and post-test on these targets.

A background to sensory strategies - arousal and sensory modulation

Many things can affect our level of sensory arousal. This includes basic things like sleep, general wellness, and hunger. Our arousal levels can also be affected by stress and processing sensory information.

One of the challenges that can occur when a person has Sensory Processing Disorder (SPD), is sensory modulation, that is 'the ability to produce a behaviour and/or response that matches the nature and intensity of the sensory input and environment' (Miller, 2014, p.14). The brains of people with SPD do not interpret the sensory messages they receive from their body effectively. This means they may not generate an appropriate response to the sensory information they receive (Bialer & Miller, 2011). This can affect their focus and attention in class or work situations and subsequently have an impact on their learning and overall performance in many areas of life.

Challenges with sensory modulation can affect all of the senses. Each sense may also be affected in a different way for the same child (or adult).

There are three types of sensory modulation challenges or responses typically outlined in the literature.

1. Sensory Over-Responsivity (also known as sensory sensitivity): the person might have a bigger response to a sensory input than is expected by someone without sensory processing challenges. So, for example, they might not be able to ignore the clock ticking and focus on the teacher.

2. Sensory Under-Responsivity: where the person underreacts or has less of a response or a slower response to sensory input than what is expected. People with this type of sensory modulation challenge might not even notice the ticking sound.

3. Sensory Seeking (Sensory Craving). This is when the person tries to get more of the sensory input, so they might move closer to the clock!

Sensory modulation affects arousal because when people process sensory inputs differently it affects their body's nervous system response. For a child who is sensitive, they might be in a higher alert or stressed state due to sensory inputs. For a child who is slower to process sensory input, they can frequently miss information. A sensory seeker might have to spend most of their energy on trying to increase their arousal level so they can attend. All of these responses affect the child's ability to focus on the teacher and therefore complete their learning

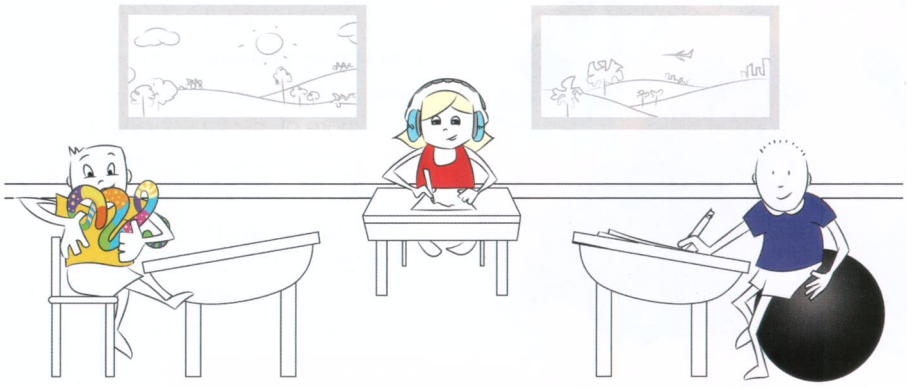
Some key facts about sensory equipment commonly used within the classroom.

Most sensory equipment is designed to help to increase or decrease a child's arousal. The children that are more likely to benefit from sensory equipment are the children that have difficulties with sensory modulation, as these children have difficulty maintaining the optimal arousal level required for learning and participation. We will look at three different types of equipment.

Fidget toys

- The idea of the toy is to give a more appropriate item for the child to fidget with and support their attention.
- The goal of a fidget toy will be to either increase focus or to decrease fiddling with inappropriate things.
- A fidget toy should not be distracting to the child or their peers. It is expected the child will still be engaged and listening whilst fidgeting.
- Things to consider when choosing a fidget toy are: durability, quietness, a toy that provides some resistance or movement. Some toys are too visually distracting (e.g. fidget spinners).
- Some children like Blu Tack or putty.

If you would like to learn more about the senses or read more tips on using wobble cushions, fidget toys or weighted products, you can find these under the 'resources' tab on Kim's website **www.griffinot.co.uk**



Weighted products

- The theory of a weighted product is that it provides additional deep touch pressure and, when the child is moving, some proprioceptive sensory input. Sensory integration theory suggests that these sensory inputs are calming for the nervous system.
- Examples of this type of equipment are vests, lap pads and blankets. These are often seen in more specialist settings such as autism support units or specialist schools.
- Weighted products, especially lap pads, can be helpful for children that fidget due to poor body awareness (reduced proprioceptive awareness). The extra weight can give them more feedback about where their body is and this means they don't need to move to 'feel' where they are. This can help them to stay in place and focus on their learning.
- The Bodison and Parham (2018) review was cautious about the efficacy of weighted vests. It said: "The evidence for the effectiveness of weighted vests with children with ADHD is limited, and it is insufficient for children with ASD. Occupational therapy practitioners should cautiously consider using weighted vests to support attention in the classroom" (p.9).

Key pointers for implementing sensory movement breaks/ circuits

Sensory movement breaks, or sensory circuits, are a common sensory strategy that schools implement to regulate and organise children's readiness for learning. Key things to consider are:

- Supporting 'sensory seekers' to get more of the sensation they are seeking (e.g. movement) doesn't necessarily effectively regulate their ability to focus and learn (Miller, 2014).
- Miller (2014) currently recommends that the movement needs to be organised and structured in order to help support the child's arousal and focus. Examples of this would be that the child needs to do a certain number of movements (e.g. 20 jumps and stop) or that it is in an organised routine (e.g. 20 jumps, climb over the frame, get the bean bag and take it to the hoop).
- A review by Ouellet, et al. (2018) found that the 'efficacy of physical exercise varies according to the child's sensory characteristics' (p.1).
- Whether more heavy work (proprioceptive-based) activities need to be included within the movement breaks to help organise sensory seekers.

What does the evidence say?

The most recent systematic review on using sensory strategies with pre-schoolers with either ADHD and ASD (Bodison and Parham, 2018) found that, although there is a huge amount of information written about sensory strategies, there are actually very few studies that have a robust research design.

Conclusion

For some children sensory equipment can prove a really useful tool to help with their arousal and attention in class. There is, however, limited evidence to support the use of these strategies. If using sensory strategies or equipment in the classroom, it is essential to ensure the effectiveness of these are monitored and they are being used correctly.

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