

Perceptions

Using the Senses to Navigate Early Psychosis

Your experience of the world is based on how your brain makes sense of everything your body interacts with around you. Our brains are fueled by sensory input – without it, the brain has no source of information. Too little or too much sensory input can also confuse the brain, but not everyone needs the same amount for the brain to do its best work. The sensory serving sizes your individual brain craves are called sensory preferences. These preferences underlie your everyday choices that determine how, where, and with whom you spend your time. Not only do these decisions influence your favorite band or type of comfort food, but sensory experiences can also influence your mood and behavior. Differences in sensory preferences between people can be misinterpreted and lead to relationship problems or make it harder to function. People experiencing psychosis in particular tend to have distinct sensory preferences that can lead to different behaviors. Occupational therapy (OT), an integral part of many early psychosis programs, can help by identifying an individual's sensory preferences, and how to feed the brain its own unique sensory diet.

To get a better idea of how sensory preferences and psychosis can influence us, let's take a look at a typical family coming into an early psychosis program.

Zach, a high school sophomore, was very active with the drama, foreign exchange, and chess clubs his

freshman year. He also ran cross country in the fall and made the school golf team in the spring. He's always been very involved and maintained As and Bs in his classes. Earlier this year he stopped going to his club activities and didn't try out for any sport teams. Zach's parents, Logan and Sierra, got emails from his teachers stating concern about Zach's school performance and his lack of engagement in class, reporting that he often appeared to be falling asleep and zoning out. Zach's grades dropped to Cs and Ds. Lately, Logan and Sierra have noticed that Zach is spending more time in his room and often appears anxious. When they try to talk to Zach about their concerns, he gets angry and locks himself in his room. Sierra notes that "Things have gotten really bad" between her and Zach. She feels as though he's always ready to pick a fight with her.

Zach's dad, Logan, works as a computer programmer. Logan's friends consider him to be very easy-going but also sometimes a bit clueless about what's going on around him. He often misses cell phone calls if he doesn't have the ringer set to loud and vibrate in his pocket. In order to get going in the morning, he uses a booming alarm clock across the room to force himself out of bed but still frequently oversleeps unless Sierra jostles him awake.

Sierra is very social, likes to stay busy, and brings lots of energy and excitement to everyday activities. Sierra and Logan both use a family calendar on the fridge,



which prevents Sierra from overbooking and provides a visual reminder for Logan. Sierra loves her job as a senior project manager. She enjoys the bustling environment, managing multiple projects and people at the same time, and the fast-paced schedule. Sierra enjoys skiing, loud rock concerts, spicy foods, and decorating the house brightly for every holiday.

SENSORY PREFERENCES AND THE EVERYDAY CHOICES WE MAKE

Just like the rest of us, Zach and his parents have very different sensory needs. Winnie Dunn,¹ an occupational therapist, developed a model describing four types of sensory preferences. Imagine a sensory cup that needs to be filled just right in order for the brain to activate and do its best work. Some people start with a cup that sits close to empty, and some a cup that's nearly overflowing. To balance the just right amount, the cup can be filled or drained by increasing or decreasing the intensity, frequency, variety, or number of sensations, such as sounds, sights, and touch on the skin. When the cup is too low, your brain isn't getting the sensory fuel it needs and transitions into hibernation mode. You may feel zoned out, irritable, or fidgety. If the cup is too full, your brain is over stimulated with sensory information and has difficulty shutting out uncomfortable or confusing sensations. This can make you feel anxious or afraid, distracted, or quick-tempered.

UNDER STIMULATED – MY EMPTY SENSORY CUP

Low registration describes a nearly empty sensory cup. Logan displays characteristics of low registration when he misses phone calls and has trouble reacting

to his alarm in the morning. He often misses or takes longer to register things that others notice, and tends to have trouble reacting to information delivered quickly or subtly. Logan's low registration also helps him, because he doesn't get bothered by extra noises and sights around him. In class, Zach displays low registration when he has difficulty keeping up with what is being said, misses details or subtle information conveyed by body language or tone of voice, and appears zoned out or uninterested.

Sensation seeking individuals enjoy sensory input and actively seek it out to keep their sensory cup full. Sierra enjoys her fast-paced, bustling job that requires multitasking, is involved in physically active sports, and decorates her house brightly for the holidays. She gets bored easily in slower paced environments that don't provide her with the diverse sensory diet her system needs, and her constant search for more stimulation may be distracting to others.

OVER STIMULATED – MY SENSORY CUP RUNNETH OVER

Individuals with *sensory sensitivity* quickly and easily notice everything going on around them. This sensitivity can support attention to detail, whether it's noting a change in a friend's mood or creating detailed art. Their sensory cup is easily filled to the brim and intense stimuli can cause it to overflow, creating anxiety and distracting the brain from its other duties. They may have difficulty adapting to change and stick to precise routines.

People with *sensation avoiding preferences* actively evade sensory experiences to prevent their full cup from overflowing. They may prefer spending time alone, because social gatherings and unfamiliar places are unpredictable and can create a sense of uneasiness or irritability. In an effort to control the amount of sensory information around them, they may be skilled at creating order around themselves with precise schedules or specific ways to do daily activities.

SENSORY PROCESSING AND EARLY PSYCHOSIS

While each person has a unique combination of sensory preferences, some specific patterns emerge within groups. In comparison to the general population, individuals with schizophrenia have an emptier cup, avoid sensation more, and seek sensation less than others.² Roush, Parham, Downing, and Michael³ found

the same pattern in individuals at high risk for developing psychosis when compared to peers at low risk, with the addition of more sensory sensitivity. This distinct combination of sensory preferences can create a tricky cup to fill, like pouring soda over ice so quickly that the fizz bubbles over the top. Zach is displaying this pattern when he appears to be zoning out in class (low registration), drops out of many of the activities he previously engaged in (sensory avoiding), and reacts badly to his mom (sensory sensitivity to her typical pattern of sensation seeking). To avoid overwhelming daily activities, interactions, and environments, individuals experiencing psychosis may spend more time alone in low stimulation settings to reduce the chances of unpredictable, unsettling sensory experiences that amplify psychosis symptoms.

MANAGING SENSORY NEEDS

Occupational therapists (OTs) use the *Adolescent/Adult Sensory Profile* to assess an individual's unique pattern of sensory processing.⁴ OTs interpret these results to identify and implement strategies to support the individual's sensory needs in daily activities. For example, a backpack or purse can provide calming weighted pressure in class or on the bus that can help the individual to focus attention. The stash of sour candies, mints or gum in the backpack are helpful to eat when feeling low on energy or having difficulty focusing, because the chewy consistency and strong, intense flavors help to wake up and focus the brain. Integrating more movement throughout the day can fill a cup to the just right level, particularly before thinking tasks – even a lap around the house during commercials can help. In class or meetings, using something small to fidget with, like a stress ball or paper clip, or sitting in a rocking chair or on an exercise ball, can help organize thoughts and stay alert.

OTs can also use Sensory Profile results to make recommendations for how the individual's family, school, employer, and treatment team can best provide support.⁵ For someone with psychosis, whose cup can quickly overflow, a switch to working the closing shift at a coffee shop avoids the crowded rush of customers while still offering opportunities to interact with others one-on-one and can include more solitary routine tasks, like stocking and cleaning. An OT may also complete the Sensory Profile with each family member. Comparing the scores of Zach and his parents, the conflict arising from Zach's irritability with his mom can be explained by their differences in sensory patterns, shifting the conflict from emotional intent to the brain's needs. These differences can be addressed by

concrete strategies integrated into daily routines, such as making different rooms in the house specific to Zach and Sierra's needs. Lights and sounds in Zach's room can be subdued to meet his needs, Sierra's room can be brightly lit with music playing to meet her needs, and shared spaces, such as the living room or kitchen, can be neutral ground with sensations of all types being kept at a moderate level between each of their needs. Sierra might also give Zach extra time to process information in a quiet space rather than expecting him to answer questions or make changes to plans on the spot. His initial overreaction might actually be a sensory processing issue, and giving him quiet time allows his sensory system to calm down before responding. By understanding each other's sensory processing needs and making some small adjustments we can help everyone to feel and do better with everyday activities.

To learn more about sensory strategies to support individuals experiencing psychosis, please visit the EASA website (www.easacommunity.org) for more resources.

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