

Finding the Key: Sensory Profiles of Youths Involved in the Justice System

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By Chi-Kwan Shea and Robyn Wu

The community-based Occupational Therapy Training Program in San Francisco studied the merits of sensory and emotional regulation for youth within the juvenile justice system to promote occupational performance.

Juvenile delinquency is a widespread societal problem in the United States. Recent data found that juveniles are involved in 13% of all arrests and 15% of arrests for violent crimes.¹ Occupational therapy practitioners have provided services to delinquent youths in various contexts, including incarceration settings, psychiatric hospitals, and the community at large.^{2–5} In San Francisco, the Occupational Therapy Training Program (OTTP) is a community-based program that serves the youth population in detention or on probation. Youths who are found to be guilty of crimes are detained at the Juvenile Justice Center (JJC) or at Log Cabin Ranch (LCR). JJC is a short-term, secure detention facility where inmates await investigative action, court hearings, or court orders for long-term placements. OTTP provides a weekly life-skills training group to the youths at JJC to address their occupational needs beyond detention. LCR is a postadjudication facility that provides an 8-month mandatory residential program addressing the educational and rehabilitation needs of these youths. At LCR, OTTP provides individual occupational therapy evaluations to residents toward the end of the program to evaluate their needs and make recommendations for community re-entry. In the community, OTTP provides a job-readiness group and individual intensive case management for youths who have been released for minor offenses or who are on probation.

Sensory Processing and Juvenile Delinquents

The topic of sensory processing was first raised by the occupational therapists of OTTP during a routine clinical meeting. The occupational therapists discussed the theoretical rationale for engaging the youth clients in sensory-motor games, which are routinely executed as preparatory activities at the beginning of group interventions. The occupational therapists questioned whether the sensorimotor interventions they had been providing, such as “musical chairs,” increases their clients’ alertness and provides a calming effect prior to engaging them in more cognitively demanding tasks. The occupational therapists also questioned whether these activities yielded similar results across individuals with varied sensory processing preferences. This discussion led the occupational therapists to realize that it would be important to gather information about their clients’ sensory processing preferences in order to inform their intervention planning and provide the most beneficial interventions.

Thus, three of the eight occupational therapists serving the OTTP began to administer the Adolescent/Adult Sensory Profile (AASP)⁶ as part of a project to better serve the sensory needs of the clients. The AASP, a norm-referenced standardized self-administered questionnaire,

is based on Dunn's model of Sensory Processing.⁶⁻⁸ Dunn identified four sensory processing patterns: (1) Low registration: "Individuals tend to miss or take longer to respond to stimuli" (p. 35);⁷(2) sensation seeking: Individuals seek high-intensity environments and experiences; (3) sensory sensitivity: Individuals respond readily to stimuli and may experience distractibility or discomfort with intense stimuli; and (4) sensation avoiding: Individuals are overwhelmed or bothered by stimuli that others would not find noxious.

The AASP contains 60 statements of an individual's response to various sensory stimuli. For each statement, respondents select a frequency rating, ranging from "almost never" to "almost always." The responses are scored according to four quadrants (low registration, sensation seeking, sensory sensitivity, and sensation avoiding). For each quadrant, normative cut scores determine a classification: (1) much less than most people, (2) less than most people, (3) similar to most people, (4) more than most people, or (5) much more than most people.

Analysis of AASP

A total of 135 AASPs completed by youths who were involved in the juvenile justice system and receiving OTTP services between February 2009 and June 2010 were analyzed. Fifty-six clients were incarcerated and 79 were on probation; 57 were female and 78 were male. The youths were between the ages of 14 and 17, with a mean age of 15.74.

Figure 1 depicts the classification distributions of the clients in the four quadrants. The classification of "similar to most people" had the highest frequency count in all four quadrants. However, the variance in two quadrants warrants special attention. In the sensation-seeking quadrant, 55 participants (40.7%) had the classification "less than" or "much less than" most people. In the sensation-avoiding quadrant, 59 participants (43.7%) had the classification of "more than" or "much more than" most people.

There were statistically significant differences in the aggregated average raw scores between the OTTP clients and the AASP's normative population; the OTTP clients scored lower in sensation seeking and higher in sensation avoiding (see Table 1 on p. 11). The occupational therapists were particularly surprised by the low score in sensation seeking, because they had hypothesized that these youths would have higher sensation-seeking tendencies, and their need to seek sensory stimulations may have led them to delinquent behaviors. From the behavioral sciences literature, a few studies have suggested that juvenile offenders exhibit an increased tendency for sensation-seeking behaviors compared with youths from the general population, as measured by the Sensation Seeking Scale (SSS).^{9,10} The SSS, a standardized personality scale developed by Zuckerman, Kolin, Price, and Zoob,¹¹ indicates that sensation seeking can be identified by "the preference for varied, novel, complex, and intense experiences and sensations, as well as by the disposition to engage in physical, social, legal, and financial risks only for the sake of the experience" (p. 199),⁹ which is different than Dunn's conceptualization of sensation seeking.

According to Dunn, sensation seeking is prevalent in most people, whose curiosity and interest in the environment lead to exploration, learning, and enjoyment.¹² However, being classified as below the norm in sensation seeking, these youths may experience less enjoyment from and lack exploration of or engagement with the sensory environment than most people, in turn limiting their choice of activity participation.⁶ The youths' low sensation-seeking behavior may also lead

to less social bonding, fewer healthy outlets such as team sports, and less pleasure derived from daily activities, which could result in poor enrichment opportunities.^{13,14} Youths who are arrested have been found to have less community involvement than their peers and a lack of positive peer and parental support.¹⁵ Furthermore, the youths' high scores in sensation avoiding suggest that they may be more likely to become overwhelmed by sensory stimuli than others. The youths' aggressive delinquent behaviors may be a manifestation of their difficulties in modulating sympathetic fight-or-flight responses to intense, aversive stimuli in their environment.^{16,17}

The combination of high-sensation-avoiding and low-sensation-seeking profiles implies that the youth participants would be less likely to seek sensory stimuli and more likely to avoid stimuli than we had expected.¹⁵ Many OTTP clients may find their natural environment uncomfortable and possibly even threatening. Furthermore, having limited interests and desire to participate in healthful extracurricular activities, these youths may lack opportunities to develop pro-social skills in order to properly modulate their responses to environmental stimuli.

Implications for Practice

Dunn advocated that by having knowledge about a person's sensory processing patterns, one can learn to make adjustments in daily routines and environments to maximize positive tendencies and minimize negative reactions in order to support optimal participation in daily life activities.^{8,12,18} Based on the information obtained about their clients' sensory processing preferences, OTTP practitioners have implemented several practice changes to better address their clients' needs.

1. The AASP is administered routinely as part of the comprehensive occupational therapy evaluation. Assessment findings are shared with the clients to heighten self-awareness of their unique sensory processing patterns.
2. Based on each client's unique sensory profile, the occupational therapists guide the youths to modify their daily routines and environments to create a better "fit" for their sensory processing preferences. For example, those who score "much more than most people" in sensation avoiding may benefit from periodically retreating to quiet, calm environments that are easily accessible to them; this scheduled retreat may help to mitigate aggressive responses by assuaging sympathetic nervous system activation.¹⁷
3. OTTP interventions specifically aim to develop clients' awareness of the sensory characteristics of their environments and to identify coping strategies for potentially uncomfortable environments and situations. For example, to prepare a client for a courtroom proceeding, a typically stressful situation, an occupational therapist may illustrate and describe various contextual factors, such as the physical layout of the courtroom, the expected attendees and their respective roles, and the typical sequence of events. Clients are also assisted in pre-planning self-management strategies to prevent them from becoming overwhelmed by the torrent of sensory stimuli in the unfamiliar situation. The youths may also practice assertive communication and relaxation techniques in order to calmly and properly address the judge at a potentially contentious court proceeding.

4. OTTP practitioners have begun exploring the benefits of infusing mindfulness interventions for their clients. Mindfulness is described as techniques used to increase one's attention to the present environment as well as to self, which may include one's emotional states, bodily sensations, and cognition, in a nonjudgmental and accepting manner.¹⁹ The strategy of mindfulness has been found to be effective in addressing various violent, stressful, and anxious behaviors.^{16,20–23} Referencing their clients' sensory profiles, the occupational therapists introduce the concept of mindfulness by providing sensory stimuli, such as fragrances, music, and texture, while encouraging clients to describe their visceral responses to these stimuli. After the clients have a beginning self-awareness of their bodily sensations, the occupational therapists lead discussions about the benefits of using mindfulness techniques. To further apply mindfulness concepts, the occupational therapists then lead a game, such as a trivia contest or a board game, with the therapists sometimes tweaking the rules to include the explicit mindfulness aspect, so that the clients can describe their feelings and thoughts at a given moment.

Conclusion

The process of systematically gathering and analyzing information about their clients' sensory profiles have led the OTTP therapists to gain important insights and to make several practice changes in order to better meet their clients' occupational needs. Since implementing these practice changes to promote self-awareness and self-regulation, the occupational therapists have anecdotally observed OTTP clients responding positively to the interventions, as evidenced by their active participation and engagement in the activities. As the youths become more comfortable in describing themselves in a neutral, nonjudgmental manner, they become more receptive to the occupational therapist's redirection, without being defensive or augmentative, which in the past was often the spontaneous response of the youths to any limit setting by the therapists during group activities. The youths are also now more open to self-disclosure among their peers, whom they otherwise tend to perceive as threatening. Having the opportunity to stop and reflect on their feelings and states of mind at the moment, as prompted by an occupational therapist, the youth participants also gain insight into their own coping skills. More importantly, with the increased knowledge gained from the sensory profiles, the occupational therapists are more confident in evaluating their youth participants' needs and providing the just-right interventions to meet those needs.

The OTTP is currently in the process of identifying appropriate outcome measures to further investigate the efficacy of these interventions. It is very difficult to evaluate the outcome of the intervention because it cannot be isolated to measure its impact on the youth, which as a population is very mobile—often in and out of the juvenile justice system and difficult to track. Nevertheless, youths in the program to date always provided very positive feedback.

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