

Sensory Approaches in Inpatient Psychiatric Settings

Innovative Alternatives to Seclusion & Restraint

ABSTRACT

The national initiative to decrease the use of seclusion and restraint in psychiatric inpatient settings requires innovative methods to facilitate the processes of consumer self-organization, self-care, and positive change. Sensory-based approaches and multisensory rooms are valuable resources as cultures of care shift to become more responsive and collaborative.

This article explores the importance and efficacy of trauma-informed approaches that are sensory supportive, address the individual needs of the person, and strengthen the therapeutic relationship.

As state mental health systems across the United States report the reduction, and actual elimination, of the use of seclusion and restraint (S/R) in psychiatric inpatient settings (Hardenstine, 2001; LeBel et al., 2004; National Executive Training Institute

[NETI], 2003), it is important to describe some of the emerging practices that account for this reduction. The creation and use of person-centered and trauma-informed tools, such as multisensory environments, improve care and promote a recovery focus. Such empowering and individualized approaches provide both professionals and consumers with valuable and practical therapeutic experiences that may otherwise be missed (Brown, 2001; Champagne, 2003b).

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Identifying environmental stressors that can lead to behavioral problems and then helping individuals better manage them are essential in reducing the need for the use of S/R (NETI, 2003). In this article, we will discuss how nurturing therapeutic environments and sensory-based treatments are effective as prevention strategies in avoiding the use of restrictive interventions and in promoting recovery-oriented mental health treatment environments (Champagne, 2003b; LeBel et al., 2004).

A PUBLIC HEALTH PREVENTION APPROACH

The public health prevention model has been shown to be useful in the reduction of the use of S/R (LeBel et al., 2004; National Association of State Mental Health Program Directors [NASMHPD], Medical Directors Council, 1999; NETI, 2003). Its core concepts include primary, secondary, and tertiary prevention interventions. This model suggests that the focus must be on ensuring S/R is never used in the first place and that the majority of strategies occur in the primary and secondary prevention stages.

Primary prevention strategies are those that support the creation of treatment environments, attitudes, and activities that reduce the potential for conflict (NASMHPD, Medical Directors Council, 1999). Secondary prevention strategies are those designed for immediate use to help resolve conflict when it does occur (NASMHPD, Medical Directors Council, 1999). Tertiary strategies are those that seek to both mitigate the effects of the S/R event, as well as rigorously analyze the causal factors so they do not occur again (NASMHPD,

Medical Directors Council, 1999). The focus of this article, the use of sensory approaches and multisensory rooms, reflects both primary and secondary S/R prevention activities.

A PERSON-CENTERED APPROACH

All health care providers should imagine, for a moment, feeling overwhelmed, unsafe, and bombarded by unfamiliar stimuli, and imagine entering a complex and overstimulating health care setting. How would they feel in this environment (Cmiel, Karr, Gasser, Oliphant, & Neveau, 2004)? What elements of a therapeutic environment would they find comforting, supportive, and responsive if they were in this state? Naturally, this answer will vary considerably for each individual. But the emerging focus on person-centered care emphasizes that it is the task of health care providers to develop care strategies through active listening and responding to consumers' needs in an individualized way (Romano, 2004). Health care institutions must go beyond verbal endorsement of person-centered care. Staff in these organizations must actually design responsive interventions *with* consumers so this is the focus of daily care (Davis, 1997; Romano, 2004).

Health care providers can learn a great deal from consumers if they actively listen and engage in co-creating treatment environments that offer diverse, meaningful, and sensory-rich opportunities (Champagne, 2003b; Hasselkus, 2002). As health care providers, we need to ask ourselves whether we are helping create therapeutic treatment environments that facilitate consumers' increased awareness of and ability to manage

their symptoms and emotional states.

TRAUMA-INFORMED CARE

The prevalence of trauma (i.e., exposure to physical or sexual abuse or other forms of violence) among consumers with severe mental illness has been reported to be as high as 90% (Mueser et al., 1998; Rosenberg et al., 2001). Some inpatient mental health settings trigger fear and negative reactions among individuals with trauma histories due to staff's lack of awareness of the trauma history and the controlling type of staff-client interactions that may occur (Cusack et al., 2003; Moses, Reed, Mazelis, & D'Ambrosio, 2003; Prescott, 2000). Appropriately addressing the needs of these individuals is essential and requires early assessment of trauma history, including identification of risk factors that may evoke intense fear responses, which could lead to dangerous behaviors (Carmen et al., 1996; Jonikas, Laris, & Cook, 2002). Trauma assessments should minimally include:

- The type of trauma.
- The age at which the trauma occurred.
- The perpetrator of the trauma.
- A description of related symptoms.

Trauma-informed care is defined as mental health care that addresses the significant effect that trauma may have on a person's neurobiology, psychology, and social relationships, and the high prevalence of traumatic experiences and disorders in people who receive mental health services (NETI, 2004).

In a trauma-informed care system, critical information from individuals' trauma history is used to develop the treatment plan and crisis plan to support

emotional self-management and cue the staff to suitably respond during times of stress (NETI, 2004). Specific information from the assessment can also be used to design sensory approaches, which offer new strategies to prevent or quickly resolve escalating situations without the use of S/R (NETI, 2004, Stromberg, LeBel, Bluebird, Huckshorn, & NETI, 2004).

INDIVIDUAL TENDENCIES AND PREFERENCES

According to Dunn (2001), "The experience of being human is imbedded in the sensory events of everyday life" (p. 608). Health care providers should ask themselves how their own sensory systems' tendencies and preferences influence their actions and relationships with others. Becoming more aware of one's own sensory tendencies, preferences, and patterns develops the ability to better understand one's responses to different environments, people, situations, and activities (Champagne, 2003b). After individuals become aware of their preferences, they become better able to purposefully organize their environment, develop strategies necessary to respond to these preferences, and make the necessary environmental and personal sensory adaptations (Bronson & Bundy, 2001; Brown, 2001; Champagne, 2003b).

It is useful for mental health providers to explore and use a variety of approaches and techniques in collaboration with consumers to facilitate self-organization and, therefore, positive change (Champagne, 2003b; Lazzarini, in press). Key to the process of self-organization is the way in which individuals manage sensory stimulation from the senses (Freeman, 1991; Thelen & Smith, 2000).

SENSORIMOTOR APPROACHES

The brain seeks information primarily by directing individuals to look, listen, smell, touch, and taste (Freeman, 1991; Thelen & Smith, 2000). Examples of common activities using the five sensory systems include:

- Watching fish in an aquarium (sight).
- Listening to classical music (sound).
- Smelling lavender, vanilla, or orange (smell).
- Squeezing a stress ball (touch).
- Eating, salty, sour, or sweet foods (taste).

It is important to note that the experience of any event is almost always multimodal, involving both the sensory and motor systems (Thelen & Smith, 2000). For example, watching clouds or looking at a bubble lamp involves eye movements and their perceptual consequences, which creates a spatial map in the brain. (Thelen & Smith, 2000). Although one may focus on a primary source of sensation as coming from one sensory system, or a combination of several, the function is a dynamic, integrated process between the sensory and motor systems (Thelen, 2003; Thelen & Smith, 2000). Thus, most of the forms of stimulation and sensory-based activities explored in this article involve sensorimotor approaches (Borg & Bruce, 2002; Bundy, Lane & Murray, 2002; Champagne, 2003b).

Sensory Diet

Wilbarger (1984) coined the term "sensory diet" to refer to the preferred sensorimotor experiences that help individuals function optimally within their environments. People modify their sensory diets automatically throughout the day to suit their

needs, without necessarily being conscious of doing so. Individuals with trauma histories, mental illnesses, or addictions, or who have developed problematic behavior patterns, are sometimes unaware of their particular sensory needs or stress responses (Champagne, 2003b; Cool, 1990; Reisman & Blankey, 1991). Multiple opportunities exist for staff in inpatient psychiatric environments to help individuals understand and participate in the development of a sensory diet.

Developing a sensory diet includes identifying certain experiences or activities that help ground, calm, center, and/or alert individuals; a process also called "self-organization" (Champagne, 2003b). For example, exercising, cleaning, moving furniture, performing isometrics, and chewing gum are examples of sensorimotor activities that are performed against resistance (Bundy et al., 2002; Oetter, Richter, & Frick, 1993; Wilbarger & Wilbarger, 1991). In occupational therapy, these are referred to as "heavy work" activities. Such activities may help some individuals ground or center themselves so they are better able to function throughout the day.

Health care providers should not make assumptions about what is helpful to individuals because what one person perceives as calming, another may not. In fact, in some cases, a calming experience may not be what individuals are seeking at all, and a more stimulating or alerting alternative may be more effective (Brown & Dunn, 2002; Champagne, 2003b; Tschacher, 1995). A study performed by Tschacher (1995) with individuals diagnosed with major depression revealed that at least half of the clients reported that relax-

ation-inducing interventions and tension-reduction strategies were not helpful. Many types of sensorimotor activities should be explored when helping individuals create and use a sensory diet, such as listening to an audiotape of ocean waves or rocking in a rocking chair (calming), sucking sour candy or taking a cool shower (alerting), and setting up tables and chairs for a group or playing tug of war (resistance).

Individual Crisis Prevention

Each person's sensory diet is an important self-organizing concept and needs to be considered in the identification of individual crisis prevention strategies for use at critical times (Champagne, 2003b). For example, if an individual wishes to watch a relaxing videotape at night to prepare for sleep but is prohibited from doing so by institutional rules, he or she may experience increased agitation or distress. If these needs are understood as part of the individual's sensory diet and as self-organizing activities, options can be made available. Many programs throughout the United States have begun to use individual crisis prevention tools, referred to as "safety tools," "de-escalation plans," or "advance crisis plans," to identify triggers and strategies prior to escalation, so a crisis may be averted or minimized (Carmen et al., 1996; Jonikas et al., 2002; LeBel et al., 2004).

Identifying specific sensory strategies and integrating them into an individual crisis prevention plan for use in response to a triggering event benefits many individuals (Champagne, 2003b; Stromberg et al., 2004). For example, people with trauma histories sometimes use self-injury (e.g., cutting, burning, swallowing objects) as a way to manage the distress resulting from the

activation of traumatic memories and flashback experiences (Mazelis, 2003; van der Kolk, 1997). Many people report that self-injurious behaviors have an immediate "orienting" effect that may be intense, calming, and/or alerting (Mazelis, 2003). With this understanding, alternate forms of stimulation can be identified to decrease or manage thoughts, cravings, or states, such as snapping a rubber band against one's wrist, holding ice, or biting into a lemon (Champagne, 2003b; Linehan, 1993; Moore & Henry, 2002). For those with anxiety disorders, calming forms of stimulation, such as progressive relaxation and deep breathing, are often helpful (Champagne, 2003b; Kinnealey & Fuiiek, 1999; Manheim & Lavett, 1989). These findings support the need to offer a full range of sensorimotor activities and the importance of continual collaboration between health care providers and consumers.

Application of Sensory-Based Approaches

Nurses and occupational therapists use sensory-based interventions within their scope of practice. Two of the more common nursing methods are aromatherapy and therapeutic touch (Buckle, 2001; Krieger, 1997). Aromatherapy has been found to diminish pain, improve sleep, and increase comfort and relaxation (Buckle, 2003). Krieger (1997) found therapeutic touch to be effective in decreasing anxiety and pain and increasing wound healing. Used together, aromatherapy and therapeutic touch are a powerful combination (Buckle, 2003). A research study using the essential oil *Melissa Officinalis* (lemon balm) was found to be effective in decreasing agitated behaviors in

older adults with dementia when applied topically to the face and arms on a daily basis (Ballard, O'Brien, Reichelt, & Perry, 2002).

Occupational therapists have significantly advanced the science, theory, and clinical application of sensorimotor approaches and have brought this expertise to inpatient psychiatric units. Three of the methods more commonly used by occupational therapists in inpatient psychiatric settings are the therapeutic use of brushing, joint compression, and weight. The Wilbarger protocol is one type of brushing protocol in which a trained practitioner applies firm pressure touch and exerts rapid brushing strokes with a soft surgical brush to the arms, hands, back, legs, and feet, followed by joint compression to these areas.

Moore and Henry (2002) performed a pilot study in a psychiatric setting with three women who had some combination of co-occurring depression and trauma-related disorders, including posttraumatic stress disorder, dissociative identity disorder, and borderline personality disorder. All of the women had symptoms of sensory defensiveness, exhibited by an aversive response to stimulation, and self-injurious behaviors. Comprehensive evaluations were performed, and client-specific protocols were developed. The effectiveness of the Wilbarger brushing and joint compression protocol, sensory-based education, and use of a sensory diet was evaluated. Treatment also included counseling and pharmacotherapy. After receiving inpatient treatment for 1 month, followed by outpatient services, these women were free from self-injury and had not been rehospitalized 8 months later. Brushing protocols have also been helpful

with people experiencing dementia, mania, depression, and anxiety (Champagne, 2003b).

Weighted blankets, vests, and lap pads are examples of devices in which weight is used as a therapeutic intervention (Walker & McCormack, 2002). These devices have been reported as helpful when used preventively or during crisis states with children, adolescents, adults, and elderly individuals (Champagne, 2004; NETI, 2004; Stromberg et al., 2004). Weighted items offer the sensation of physical holding and containment, and may facilitate self-organization when an individual's capacities are tenuous. For example, one woman with a history of self-mutilation described a weighted vest as a "bullet-proof vest" in which "nobody can hurt me." Instead of her behavior escalating to the point at which S/R would have been used, the woman now asks for her vest and finds the pressure across her back and chest helps her "stay in control" (Stromberg et al., 2004). Weighted items should be heavy enough to be effective, as determined by the individual, yet light enough to be removed at will. As with all of the interventions described in this article, the individuals' preferences and responses should be considered in determining duration of use.

MULTISENSORY TREATMENT ROOMS

The first multisensory room was developed in 1975 by Jan Hulsegge and Ad Verheul at the Hartenburg Institute in the Netherlands (Hulsegge & Verheul, 1987). These environments were initially created for people with profound physical and mental limitations and were referred to as "Snoezelen" (Hulsegge & Verheul, 1987).

During the 1960s, A. Jean Ayres pioneered the sensory integration framework within the field of occupational therapy (Ayres, 1974, 1979). By the 1970s, occupational therapists began creating treatment spaces filled with equipment necessary for implementing a combination of directive and nondirective sensory-based therapeutic exchanges.

Multisensory environments are currently being used in a variety of psychiatric facilities with different age groups and populations and are frequently referred to as "sensory rooms" or "sensory-modulation rooms" (Champagne, 2003b). Since 1999, in collaboration with occupational therapists, many adult inpatient psychiatric programs have begun developing sensory rooms, and currently, use of these rooms is a growing trend nationwide (Champagne, 2003a). These rooms are used for individual and group sessions and offer a combination of sensorimotor activities, with calming and alerting options for each of the sensory areas. In South Florida, a nurse and consumer activist developed "comfort rooms" as a place of respite on busy 50-bed units within a 350-bed psychiatric hospital (Bluebird, 2004). Optimally, consumers and staff are involved in painting the walls, decorating, selecting furniture and artwork, and developing policies and procedures for use of the room and equipment (Bluebird, 2004; Champagne, 2003b).

In 2002, the majority of inpatient child and adolescent programs in Massachusetts began to develop sensory rooms in response to an initiative led by the Commonwealth of Massachusetts Department of Mental Health aimed at preventing the use of S/R (LeBel et al., 2004). With occupational thera-

py consultation or oversight, a variety of programs developed sensory spaces for children and adolescents with names such as the "Zen Room," "Cool Room," "Peace Room," and "Chillville." Each program made the commitment to have a supportive place for children and adolescents to draw, bounce, play, and use weighted blankets, indoor tunnels, and climbing structures, depending on their needs, in physically appealing environments. These interventions promote self-organization through physical outlet, self-expression, and/or containment, thus reducing the need for S/R.

Although few published research studies have evaluated the effectiveness of multisensory treatment rooms, one study demonstrated that the therapeutic exchanges occurring within these rooms were effective in reducing maladaptive or stereotypical behaviors (Hutchinson & Hagggar, 1991). A second study reported that, among certain individuals, the therapeutic use of multisensory environments appears to facilitate an improvement in the ability to concentrate during task performance (Ashby, Lindsay, Pitcaithly, Broxholme, & Geelen, 1995).

EVALUATING THE USE OF SENSORY-BASED APPROACHES

In 2003, a quality improvement study was conducted on a 24-bed psychiatric unit located within a general hospital (Champagne & Sayer, 2003). The primary goal was to evaluate the consumers' perceptions of the effectiveness of the sensory-modulation room and sensory-based approaches. The room was approximately 9 feet by 16 feet, with sponge-painted walls on which posters of nature scenes were hung. It contained a variety

KEYPOINTS

1. The national initiative to decrease the use of seclusion and restraint in inpatient psychiatric programs requires exploration and implementation of a range of innovative interventions.
2. Sensory approaches go beyond traditional psychiatric methods, are supportive to the individual, and promote self-organization.
3. These trauma-sensitive approaches are helpful to consumers and can be used as early interventions to avoid or minimize crises.
4. Sensory approaches strengthen the therapeutic relationship, promote collaboration and recovery, and are fully applicable across age groups, mental health settings, and consumer populations.

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of seating options (i.e., bean bag chairs, rocking chairs, and a glider rocker), a bubble lamp, music, and other items that addressed each of the sensory areas. In addition, self-help books and magazines focusing on health, wellness, yoga, and nature were available.

Consumers rated their perceived levels of distress both before and after each session using a qualitative questionnaire and a 10-point ordinal rating scale. The scale represented a description of one's emotional state, with 0 = very calm and 10 = severe distress. The study included 96 sensory room sessions and 47 consumers, ages 17 to 93, with a mean age of 40. Using the diagnosis at discharge, the clients served had a broad range of diagnoses including schizophrenia, bipolar disorders, depression, borderline personality disorder, dementia, adjustment and anxiety disorders, and substance abuse.

It was reported that 89% of the sensory room sessions had a positive effect, 10% had no effect, and 1% had a negative

effect. Significantly, the clients experiencing the highest levels of distress at the beginning of each session reported the most substantive positive changes in perceived levels of distress after use of the room. In addition, the facility's rates of S/R (episodes per 1,000 patient days) decreased by 54% during the course of the year of implementation (2003). The use of the multisensory room and sensory-based approaches demonstrated clear benefit to the majority of consumers in reducing self-reported levels of distress (Champagne & Sayer, 2003).

STAFF TRAINING, POLICIES, & PROCEDURES

To establish a sensory-based program, training for clinical and direct care staff in the use of multisensory rooms and sensorimotor approaches is necessary and is best accomplished in consultation with an occupational therapist. The integration of sensory-based approaches with crisis prevention skills training is important in underscoring the critical link between sensory preferences

and sensory-based resources, and their use in helping individuals self-regulate at the earliest possible time.

Training should also include an understanding of how to minimize environmental triggers, offer soothing environmental interventions, and fully integrate sensory strategies into safety plans. The development of policies and procedures is necessary to guide the safe and appropriate use of sensory approaches and use of the multisensory room and equipment.

CONCLUSION

The research available and the authors' experience suggest that sensory-based approaches and multisensory treatment rooms are beneficial to both individual consumers and inpatient psychiatric programs. These innovative approaches offer greater depth and breadth of responses and facilitate individuals' ability to self-organize. They expand the range of therapeutic interventions available and are useful in avoiding or resolving crisis situations that could lead to S/R. Staff may benefit by being better able to strengthen the therapeutic relationship, offer creative and holistic strategies, and promote individuals' health and recovery.

These approaches are applicable across age groups, consumer populations with varied diagnoses, and levels of care. The methods described in this article are only a few of those available in a rapidly expanding field. Research is needed to continue to evaluate the benefits of these approaches for mental health consumers.

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