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Environmental Modifications in Practice: Enhancing Quality of Life and Autonomy: Part 1

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Positive Approaches Foreword

“In essence, Positive Approaches is a worldview, in which all individuals are treated with dignity and respect, in which all are entitled to Everyday Lives.”

—Beth Barol, 1996

The first issue of the *Positive Approaches Journal* was published in summer 1996 and focused on four domains: environment, communication, assessment, and “hanging in there.” In the 29 years since that first edition, we have rebalanced our human services system so that most people are served in community versus facility settings. During this time, we have also witnessed significant advances in our understanding of trauma, brain development, genetics, and treatment options. In spite of these advances, the lessons from that first edition of the journal still hold relevance for us today because, as a system, we still face challenges in supporting people with co-occurring intellectual or developmental disability and a serious mental illness to live Everyday Lives.

As our service systems continue to move away from institutional and congregate care and toward supporting people to be fully engaged in their communities, the need to revive the *Positive Approaches Journal* became clear to us. People who have dual diagnoses face some of the greatest challenges for true inclusion and being connected with their communities. We need to work together to develop best practices and appropriate services and supports. The *Positive Approaches Journal* is part of a broad effort to build this capacity and support best practice in service delivery for people with dual diagnoses. The *Journal* will also allow us to share, communicate and collaborate as we address this very important issue.

We are eager for the submissions that will come from practitioners and theorists here in Pennsylvania that will drive innovation at all levels in our service systems. It is truly very exciting to begin publishing the *Positive Approaches Journal* again, and it is with great pleasure that we present to you Volume 14, Issue 2.

Kristin Ahrens
Deputy Secretary
Office of Developmental Programs

Jennifer Smith
Deputy Secretary
**Office of Mental Health and
Substance Abuse Services**

Positive Approaches Journal Mission Statement

To improve lives by increasing capacity to provide supports and services to individuals with mental health and behavioral challenges, intellectual disabilities, autism, and other developmental disabilities, using the guiding principles of Everyday Lives and the Recovery Movement.

Through case studies, articles, interviews, and related academic sources, *Positive Approaches Journal* will strive to feature resources, observations, and advancements that are relevant and timely to professionals and supporters.

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Introduction

When considering the concept of treatment, the process often places an immense responsibility on the person to be aware of their thoughts and behaviors as a mechanism to facilitate change. However, growth can be supported through numerous avenues, and not all progress should be solely dependent on the person. An essential aspect of promoting success involves acknowledging the environment where an individual lives, works, or navigates the community. Our surroundings can serve as a powerful catalyst for encouraging positive behavior. Environments that are thoughtfully molded or adapted to meet specific needs can significantly enhance opportunities for growth and development.

Fostering supportive environments requires a willingness to be flexible and think creatively—“outside the box.” The purpose of this issue of the Positive Approaches Journal is to delve into the vital role of environmental modifications in promoting positive change. Adaptations can vary widely, and our aim is to inspire ingenuity by highlighting innovative strategies employed by practitioners and programs. These modifications are designed to create more idealistic environments—settings tailored to the unique needs of each person.

By showcasing the creativity and effectiveness of these approaches, we hope to encourage a broader awareness of the influential role that environment plays in facilitating positive behaviors. Ultimately, supporting people in achieving their potential involves a shared responsibility to craft environments that enable success and growth.

George Bell IV,

Clinical Director, Office of Developmental Programs

Data Insights

Support Insights: How HCBS Help Create More Accessible Environments.

Molly Sadowsky and Conner Carlton

Many people with intellectual and developmental disabilities (IDD) require assistance with activities of daily living, including bathing, dressing, and eating.¹ Most states provide Home and Community Based Services (HCBS) to assist with these tasks through Medicaid Waiver programs.² Waiver programs may be designed to serve specific populations, such as older adults and people with disabilities, and often have medical and financial eligibility requirements. Each year, about 4.5 million people receive HCBS through 1915(c) or 1115 waivers, or through the Community First Choice option. Nearly all states provide HCBS waivers to people with IDD.¹

In Pennsylvania, HCBS are provided to people with IDD through 1915(c) waivers, including the Adult Autism Waiver (AAW), Community Living Waiver, Consolidated Waiver, and Person/Family Directed Support Waiver (PFDS).³ As of February 2025, there were nearly 40,000 people enrolled across all intellectual disability and autism spectrum disorder (ID/A) waivers in Pennsylvania, including nearly 20,000 people receiving services through the Consolidated Waiver, over 13,000 receiving them through the PFDS waiver, and about 7,500 receiving them through the Community Living Waiver. Demand for waiver services remains high, with recent estimates indicating at least 13,000 people on the waitlist for services.³

Home accessibility modifications are covered under most HCBS waivers and are important in supporting health, safety, and independence for people with IDD. Most of the current housing stock lacks basic accessibility features like no-step entry, wide halls and doorways, and electric controls and switches.⁴ In 2021, it was estimated that across all states, only 1.5% of people with

IDD enrolled in HCBS waiver programs received environmental modifications.⁵ In 2021, 314 people with IDD received environmental modification services in Pennsylvania, accounting for less than 1% of individuals enrolled in ID/A waivers. Statewide, Pennsylvania was projected to spend about \$1.7 million on environmental modification services, which amounted to only 0.05% of all HCBS spending that year and about \$5,000 per participant.⁵ The most common home modifications requested included ramps and/or lifts, widening doorways and hallways, bathroom modifications, specialized electrical and/or plumbing equipment for medical use, and grab bars and/or handrails.⁵

All [HCBS programs in Pennsylvania](#) provide Home Accessibility Adaptation Services for people with disabilities to increase accessibility in their homes. Each waiver program includes two categories of these services: 1) equipment, technology, and modifications and 2) home and/or vehicle accessibility adaptations. In Pennsylvania, ID/A waivers cover physical modifications to the primary residence of the waiver participant, including homes that are owned or leased by parents or relatives. Modifications must be specified in the participant's Individual Support Plan as necessary for the participant to live with greater independence in their home. Home modifications include the cost of installation, repair, maintenance, and extended warranties for the modifications. For AAW and PFDS waiver participants, there is a \$20,000 cap per participant over a 10-year period in the same home.

Inaccessible home environments for people with IDD may increase risk for adverse outcomes like falls and injuries and introduce barriers to independent and community-based living that HCBS waivers aim to support. Across all states, there is evidence suggesting that despite a potential need, few people with IDD receive environmental modifications through the HCBS waiver programs they are enrolled in, which may decrease community participation among

people with IDD.⁶ Further research is therefore needed to understand the need for and receipt of environmental modifications for people enrolled in HCBS waiver programs in Pennsylvania.

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Biography

Molly Sadowsky is a research scientist in the Policy and Analytics Center at the A.J. Drexel Autism Institute. Her research focuses on identifying barriers in access to care and the experiences of people with intellectual and developmental disabilities (IDD) across the life span. Molly is the Director of the ASERT Collaborative in the Eastern Region, leading community-anchored projects that focus on improving access to quality services, providing support to families, training professionals in best practices, and collaborating with community partners.

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Designing for Safety: A Trauma-Informed Approach to Environmental Design in Community-Based Wellness

Riki Geyer, MSW, NADD-DDS

Abstract

Building on the foundational work of Martin and Thvedt in “The Importance of Place in Trauma-Informed Care: A Wellness Approach,” this article provides a deeper exploration as to how environmental design plays a critical role in resiliency and trauma-informed care. Through the lens of environmental psychology, Polyvagal Theory, and sensory-informed practices, this article examines how physical spaces communicate safety, autonomy, and belonging. Using outcomes from Shared Wellness—a community-based center that integrates these principles into its architectural, programmatic design, and organizational culture—this article demonstrates how spaces can become catalysts for co-regulation, recovery, and empowerment for both individuals with intellectual and developmental disabilities (ID/A) and their supporters. This article also emphasizes how intentionally using trauma-informed design principles can create a “green light state” for the nervous system that provides the foundation for both physical and psychological safety, enabling resilience to develop and thrive. The design principles outlined here move trauma-informed care from philosophy into practice, offering replicable strategies for organizations seeking to create environments that truly support healing.

Introduction

In their article “The Importance of Place in Trauma-Informed Care,” Martin and Thvedt set forth a challenge:⁷ to reimagine the environments where care takes place, grounding them in principles of wellness, empowerment, and trauma-awareness. Their call recognized that that place is not neutral—it shapes how individuals feel, behave, and relate to others. As trauma-informed care continues to grow in scope and importance, it is increasingly clear that healing is influenced as much by the physical environment as by the therapeutic intervention.

Resilience begins with bodily safety—when the body can relax, the mind gains adaptability, learning is enhanced, and growth is possible. In trauma-informed environments, this “green light state” shifts individuals away from the survival-driven question of “What’s wrong with me?” toward the more constructive “What’s strong with me?.” A calm, regulated presence in caregivers fosters environments where skill development can take root and people can learn to create a sense of safety within their bodies as needed. Essentially, individuals in distress cannot process new information effectively, their reactions are instinctive rather than deliberate. Establishing common ground and supportive communities contributes to learning how to find safety and calm within one’s own body, resilience, and long-term recovery.

Examining how trauma-informed environmental design creates spaces that are not just safe but actively healing is one way to respond to the challenge set by Martin and Thvedt. Drawing from environmental psychology, sensory integration theory, and Polyvagal Theory, describes how physical settings—when intentionally designed—can reinforce nervous system regulation, increase autonomy, and support positive behavioral outcomes. This discussion is grounded in the implementation of Shared Wellness, a center that has fully integrated trauma-informed design into its physical and operational infrastructure. This approach sets the stage for safety and

enables individuals to more fully engage in mindfulness activities and therapeutic interventions. The outcomes from Shared Wellness affirm that thoughtful design can reduce behavioral crises, enhance co-regulation, and build a culture of collective healing.

The Physical Environment as a Source of Safety

“Some spaces hold you the moment you arrive. The light is different. The air feels spacious. The noise in your mind quiets. Your body starts to trust the ground beneath your feet. These are the places where change happens naturally — not by force, but because the space itself invites it.”

– Master Mingtong Gu from The Chi Center for Wisdom Healing.⁸

Every environment communicates cues—about what is expected, what is safe, and what is possible. For individuals with trauma histories, including many with ID/A, these cues can profoundly affect emotional and physiological responses. Polyvagal Theory (Porges, 2017)² explains that the body continuously scans for signs of danger or safety in a process called neuroception. When individuals are in the “social engagement” state, learning and connection are possible. But, when environmental cues trigger fear-related thoughts, the nervous system shifts into fight-or-flight, narrowing attention to survival and reducing the capacity for growth. While every individual has a unique perspective of what they identify as dangerous, in general environments that are cluttered, noisy, chaotic, or unpredictable can signal danger, triggering defensive behaviors such as withdrawal or aggression.

In contrast, environments designed with intentionality can support a felt sense of safety. Facility design can directly influence perceptions of safety; spaces that are open, comfortable, and predictable help maintain regulated states and make it easier for individuals to stay in a resilient, learning-ready mode. At Shared Wellness, this principle was applied through:

- Clean, organized spaces that reduce cognitive and sensory overload
- Clear spatial boundaries that define purpose and foster predictability
- Natural elements such as wood, water, and plant life that evoke calm and grounding
- Quiet, sensory-calming spaces that allow for retreat and recovery
- Flexible lighting, sound, temperature controls, and a variety of seating options that support autonomy and sensory regulation

Each of these elements contributes to an environment where the body and mind can down-regulate. When the environment provides cues of safety, it provides the opportunity for those who enter the space to experience internal safety. This alignment of internal and external safety is essential to the development of lasting resilience. Subsequently, when individuals feel safe, they are more open to learning, connection, and healing.

Designing for Autonomy and Identity

Trauma often involves a loss of control and a disruption of personal agency. Environmental design can play a role in restoring both. Providing individuals with the ability to make choices about their surroundings—adjusting lighting, choosing seating, participating in decorating or organizing—reinforces a sense of ownership, autonomy, emotional safety, and belonging. These moments of choice help regulate the nervous system by reinforcing a sense of control and predictability, which are critical in Polyvagal-informed environments. Activities and celebrations such as Monthly Culture Club and World Flavors Potluck help participants see themselves reflected in the space. This attention to representation promotes emotional safety and a sense of belonging, which are foundational to trauma recovery.

Sensory-Aware Design and Emotional Regulation

Overstimulation is a common trigger for individuals with trauma histories or sensory sensitivities. Lighting that is too bright, sound that is unpredictable, and smells that are overwhelming can all lead to dysregulation. The Shared Wellness design process prioritized:

- Water features including a water globe and water windows in therapy rooms
- Ambient, indirect lighting that is warm and dimmable
- A redesigned HVAC system that turns on and off silently
- Background soundscapes (e.g., nature sounds, music) with access to silence when needed
- Texture variety: soft furnishings in retreat spaces, more structured surfaces in group areas
- Diverse seating to provide options with and without arms, swivel and spin options as well as massage chairs
- Natural ventilation and diffused aromas with the option to opt out of scented environments
- Tools for sensory stimulation and deprivation, such as fidgets, weighted blankets, punching bags, light walls, and access to outdoor space

By offering both stimulating and calming sensory inputs, individuals can find their optimal regulation zone. This dual availability supports self-regulation and allows caregivers to co-regulate alongside those they support, further reinforcing community resilience.

Feedback, Flexibility, and the Power of Adaptation

One of the most trauma-informed design principles is flexibility. Spaces must evolve as the needs of their users change. At Shared Wellness, participants and staff are routinely asked for feedback about the environment. Changes—such as rearranging furniture, adjusting noise levels, or introducing new textures—are made in response to these insights.

This adaptability sends an important message: the environment is responsive, and the individual's experience matters. Over time, this builds trust and strengthens the shared sense of safety, a necessary foundation for resilience. When individuals see that their input leads to real change, trust is built—and the space itself becomes a living, adaptive part of the healing process.

Program Outcomes Around Shared Wellness

Shared Wellness provides a real-world example of how trauma-informed environmental design can lead to meaningful outcomes for typical program attendee as well as for the highly dysregulated individuals who often experience challenges such as property destruction, self and other injury, and psychiatric hospitalizations. Since integrating the principles described above, the program has observed:

- A 40% reduction in behavioral health crises which includes: community-based crisis response, facility-based crisis response, immediate arrest and incarceration crisis response, psychiatric hospitalization (involuntary), psychiatric hospitalization (voluntary)
- Significant increases in heart rate variability (HRV), indicating improved autonomic nervous system regulation, for 72% of program participants
- Zero incidents of property destruction at The Wellness Center
- Enhanced emotional regulation and engagement from both participants and staff
- 20% reduction in restrictive procedures
- Greater staff satisfaction and reduced burnout, attributed in part to the calming and supportive environment
- Participants and staff reported increases in feelings of safety, connection, and well-being

These outcomes demonstrate how aligning environmental design with nervous-system science and resilience-building strategies can create measurable, lasting change. They affirm the original

hypothesis put forth by Martin and Thvedt⁷: that place matters deeply in the experience of trauma recovery and both the development and maintenance of resiliency, and that intentionally designed environments can be transformative.

Conclusion

Martin and Thvedt invited Shared Wellness to consider place as an integral part of trauma-informed care. At Shared Wellness, that invitation has been taken seriously and operationalized through thoughtful design, co-creation, and environmental responsiveness. This article illustrates that trauma-informed environmental design is not a luxury, but a necessity. It can reduce crises, promote regulation, and foster resilience in both individuals and caregivers.

In trauma-informed systems, healing is not confined to therapy sessions. It is embedded in every corner of the physical world—in the lighting, the seating, the color selection, the temperature, and the flow of space. It is present in the choices people are allowed to make about where they sit, what they see, and how they engage. It is also present in the calm, regulated presence of caregivers who model safety and invite connection. Most importantly, it is sustained by a culture that sees the environment not as a backdrop, but as a partner.

In this way, Shared Wellness offers a blueprint for what comes next: environments that don't just accommodate trauma-informed care but embody it by moving the needle towards creating connection and resilience.

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Biography

Riki Geyer has been working to support individuals with developmental disabilities and behavioral health needs for 20+ years. During this time, Riki has had a variety of roles building programs, facilitating trainings, supporting staff at all levels, analyzing data, and collaborating with system partners. All of these roles have focused on building systems to enhance quality services and ensure that clinical supports are both innovative and effective. Riki prides herself on sustaining a trauma-informed culture and creating a work environment that recognizes and values the dignity and worth of every individual. When not at work, Riki enjoys spending time with her family and beloved pets, reading, and finding creative outlets such as painting and roller skating.

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Creating Nurturing Environments to Support Mental Health

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Abstract

Individuals with neurodiversity receive and interpret sensory information differently than their peers who do not experience neurodiversity. These differences add challenges to effectively coping with a sensory rich environment. Careful planning for supportive environmental design can bolster their ability to cope with challenges of daily life. This article highlights evidence-based techniques to create supportive environments utilizing the Ecology of Human Performance Theory from occupational therapy.

Theoretical Underpinnings

Evidence-based interventions presented in this article align with the occupational therapy frame of reference, the Ecology of Human Performance.¹ This theory discusses the interplay between a person and their environment. It further explains how the relationship between person and environment affects the ability to complete tasks essential to one's life. The concept of ecology reflects the need for efficient processing of information received from the environment and reacted to by the person's sensory systems. A person's skills and behavior grow from the interaction between the person and their context – whether physical, social, or environmental. The context in which a person exists endlessly changes due to its dynamic nature and interactions with the environment.

Occupational Therapy

Occupational therapy, an established branch of healthcare, grew exponentially in 1920 when soldiers returned from World War I with various mental and physical health needs.² Occupational therapy practitioners (OTP) recognize the interrelated nature of the client's mental health and engagement in essential activities, seeking to improve both.³ OTPs adapt the physical and social environment as well as the demands of the activity to support the client's successful engagement³. OTPs may recommend strategies and resources for the client to minimize physical and psychological challenges that affect occupational engagement.

Sensory Integration

The term “sensory integration,” developed by A. Jean Ayres, reflects a homeostasis in receiving, interpreting, and responding to stimuli – both internal and external. Treatment procedures aim to provide specific stimuli of appropriate quality and type. These sensations elicit organizational effects on the subcortical processing mechanism of the central nervous system. Sensory

integration techniques provide controlled sensory input, organization and interpretation of stimuli, and generate adaptive responses.⁴ Sensory strategies support coping skills by finding other ways to react to impulses and allow time to choose more acceptable behaviors and reactions. Having easy access to tools that calm sensory systems remains paramount to the process.⁵ A comfortable stimulus assists in organizing central nervous system processing functions which attenuate, and allows for interpretation of, stimuli in the environment. If there exists an increase in unmet stimulus needs during non-treatment periods, sensory integration can provide a gradual reduction of anxiety and often decreases self-injurious behavior.⁴

Sensory Rooms

Representing the strongest evidence for modification of the mental-health environment, sensory rooms provide a change to the physical environment. These calming rooms give allotted space for safety plan implementation, adapting current groups, and engagement in sensory experiences.^{5, 6, 7} A sensory room typically features calm, cool colors such as shades of green or blue. Different features may include a nature mural, decreased light and sound, and comfortable seating options. These rooms provide a “safe space” where patients self-regulate and take the onus for their choices. Sensory items such as weighted objects, fidget toys, and supplies for journaling kept in an accessible cabinet allow for patients to select items which support their mood. Reported patient and staff experiences show that sensory rooms support emotional regulation, promote self-management, and positively impact the overall patient admission experience and ward environment.⁷

Sensory room users report positive overall effects of spending time in the room – especially noting emotional regulation.⁸ Patients expressed that the person-centered nature of the sensory room reinforced the concept of being a “person,” the importance of the care environment, choice

and responsibility, risk awareness and management, as well as different forms of knowing.⁹

The sensory room acts as a “safe space” away from the bustle of a noisy and busy atmosphere.

Sensory room users described that sensory strategies helped them to lessen their dependence on another person by increasing their responsibility and self-control.⁵ Availability of sensory items allows the user to make choices for themselves – an important skill for community integration and empowerment.⁸

Music

Relaxing music improves overall behavior of mental health patients, especially with self-selected music. Familiarity with music selections supports optimal relaxation when utilized as a coping skill. Of further benefit, music has been found to improve the quality of sleep in mental health settings.⁹ Listening to music causes the sympathetic nervous system to decrease norepinephrine, lowering depression and anxiety. When used in conjunction with sensory rooms, findings indicate an improvement in patients’ mood. Music may be accessed through personal devices like an MP3 player, CD player, radio, cell phone (or other personal device), television channels, or via internet access.

Other Facility Adaptations

Handrails

Use of handrails can increase the safety of a patient’s environment but can also pose additional hazards as possible ligature (tying an item around the neck) risks—as patients may use these items for self-harm or attempts at strangulation. To mitigate this risk, many facilities utilize handrails without space behind them so that patients cannot tie anything onto them. These are helpful along corridors, as well as in shower and toileting spaces for safety from falls and

assisting in balance.

Hats

Patients who bang their heads or are a fall risk, often benefit from the use of a protective head covering. Some models are large and unattractive and may cause a feeling of stigma when worn, although they would provide safety for the wearer. There are also regulations and requirements for when these are, and are not, acceptable. An online search will provide resources for padded hats—beanie-type, fishing-style, and even baseball cap hats that offer protection while appearing as a typical hat, which can be easily removed when needed.

Vests

Sensory stimulation for calming includes various weighted and compression garments. Both kinds of clothing, such as vests, scarves, or lap pads, provide sensory proprioceptive input. Proprioception provides information about the body's position and movements through receptors in joints without needing to use vision. The role of proprioception in daily activities, exercise, and sports has been extensively investigated for the lasting calming effect of joint pressure and movement.¹⁰ Weighted vests use heaviness to stimulate proprioceptors in the major joints of the body, but weight must be added after the patient attenuates to the stimulation. Compression garments provide a “hug” to the body and present another clothing option for those who are hypersensitive to touch.

Fidgets

Different toys for physical manipulation and sensory stimulation provide a distraction for those with sensory processing difficulties. Consulting with an occupational therapy practitioner allows for individualization and identification of effective sensory items. Common fidgets include squeeze balls, textured balls, flexible or spongy items, “pop-its,” stress cubes, or any small

manipulative. Caution should be used when choosing items for individuals who eat non-food items or those who may use pieces to self-harm.

Case Examples

Client one, a 33-year-old female with autism and post-traumatic stress disorder, experiences hypersensitivity to sound, covering her ears and crying when loud shouting or crying appears in her environment. Her occupational therapist evaluates her using a standardized assessment and creates a sensory plan for her. The client is educated about using the sensory room as a calming space when noises are overwhelming. For times when she cannot access the sensory room, she carries an MP3 player in her pocket and plays music to calm herself before feeling overwhelmed. When she attends large events or knows she will be around loud noises, she wears noise-canceling headphones to prevent noise-induced anxiety. Over time, she learns how to prepare herself to avoid her sound triggers, giving her a sense of empowerment and control.

Client two is a 41-year-old male diagnosed with bipolar I disorder with autistic features. He jumps off curbs, crashes into his peers in the hallway, and has had several falls recently. He displays low muscle tone—being very flexible with loose joints and muscles—which makes safely navigating his environment challenging. His occupational therapist recommends wearing a weighted vest to give more sensory input. This client follows scheduled times for him to walk over different surfaces for a variety of different sensations while accompanied by staff for safety. He joins exercise groups to strengthen his muscles and learn his body's position in space to avoid running into others. Over time he falls less frequently, and staff notes a decrease in impulsive behaviors—supporting his safety.

Conclusion

The creation of a supportive environment assists those with mental health needs to prevent overstimulation, provides safe places to self-regulate, and supports safety for patients and staff.

Studies continue to identify sensory strategies and practices to support people with altered sensory systems in organizing, interpreting, and responding to stimuli in more effective ways.

Creating a nourishing sensory environment, gives patients the best chance to learn autonomy and coping skills for success in facilities and in the community.

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Biography

Erin M. Naggy is an occupational therapist with over 25 years of experience working with families. She graduated from Gannon University in 2000 with a Bachelor of Science degree and received her Occupational Therapy Doctorate from Chatham University in 2017. She has worked in academia for several occupational therapy assistant and doctor of occupational therapy universities. She has presented for Children's Interagency Conference, Forensic Rights and Treatment Conference, the American Occupational Therapy Association, Pennsylvania Occupational Therapy Association, Early Childhood Education Summit, and Assistive Technology Industry Association Conference. She currently works as an occupational therapist at Torrance State Hospital treating in their civil and forensic programs. She can usually be found reading, cooking, or transporting her children all across western PA as an unofficial mom taxi. She enjoys connecting with fellow colleagues and can be reached using the contact information below.

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Positive Impacts of Environmental Modifications for Individuals with Autism and Dual Diagnosis Conditions.

Carly L. Staples, MEd, NADD-DDS

Abstract

A common misconception in society is that all people with autism, intellectual developmental disability (IDD), and co-occurring mental health (MH) present similarly and therefore are treated by generalized supports and interventions. This could not be further from the truth. People with autism, IDD, and co-occurring MH are diverse, exhibiting a wide range of strengths, challenges, and personalities. The best approach to supporting an individual with the aforementioned diagnoses is utilizing person-centered supports. Person-centered supports are tailored to the uniqueness of each person, centering their care around their specific needs and preferences, rather than applying a generalized approach¹. This article will highlight how specified environmental modifications can be implemented in order to best support a person with autism, IDD, and co-occurring MH conditions, who engages in severe, self-injurious behaviors, to promote both safety and quality of life.

Introduction

Supporting people with autism, IDD, and co-occurring MH disorders often presents unique and arduous challenges. These challenges are increasingly compounded when self-injury is present. When an individual with autism engages in self-injury, such as head banging, this is often classified as a type of stereotypical movement disorder. These are repetitive, purposeless movements that may appear self-stimulatory or instinctual. The causes of head banging are complex and not fully understood. Researchers believe that abnormalities in brain circuits, especially within the basal ganglia and dopaminergic pathways, play a significant role. These abnormalities can result in neurotransmitter imbalances involving dopamine and gamma-aminobutyric acid (GABA), which are crucial in movement regulation.

In individuals with autism, head banging can be more frequent and severe compared to neurotypical peers and is often in response to sensory issues. While head banging is common in autism, it is classified as a separate disorder when it causes serious self-injury or interferes with daily functioning. Especially when it is not solely driven by autism but also by underlying neurological or behavioral factors, understanding the underlying causes can help guide effective interventions. Addressing factors such as sensory needs, communication difficulties, and emotional distress is crucial in managing head banging behaviors. The complexities of supporting a person with a myriad of diagnoses along with self-injurious behavior (SIB) require intricate, specialized environmental modifications in order to ensure health, safety and a heightened quality of life.

Synopsis

Charles was born of a normal pregnancy with no complications. He met most of his gross motor developmental milestones typically, while not meeting developmental milestones related to

communication typically. After year three, more significant delays were identified and by year four, Charles was diagnosed with autism and IDD. Charles attended private special education schools throughout his adolescence. His behaviors were typical for an individual diagnosed with autism and IDD until around age 13 with the onset of puberty. During this time, more significant behaviors were noted such as several SIB, physical aggression, and property destruction. By age 15, his family was no longer able to maintain his safety within their family home due to these behaviors. At this time, Charles was placed within a residential treatment facility (RTF). Charles resided in the RTF from the age of 15 until 21. At this time, Person Directed Supports (PDS) was contacted regarding his emergent need for placement. During interim meetings with the RTF, it was discovered that Charles was previously accepted into PDS' adult program, but this was quickly rescinded without reason.

With minimal notice and minimal information regarding any maladaptive behaviors, PDS accepted Charles into the program, and he moved in with PDS in November of 2024 after a request by an Administrative Entity (AE) on an emergency basis (with less than 24-hours' notice). It was quickly discovered that Charles had very intensive behaviors including SIB, excessive head banging on surfaces, both superficial and substantial, such as walls, tables, floors, windows—any surface near him during the time of escalation—and biting his hands. The behavior was paired with physical aggression in the form of hitting, kicking, head butting, throwing items at others, property destruction, ingesting non-food items, eating feces, and engaging in fecal play, excessive masturbation—both at home and in public, and disrobing—both at home and in public. An initial functional behavioral assessment (FBA) was conducted during his first 60 days of service with PDS. The initial assessment involved direct observation of Charles by the behavior specialist (BS) and occupational therapist (OT), a comprehensive

sensory evaluation conducted by the OT, a sensory profile also completed by the OT, interviews with family members and supporters of Charles, review of what minimal records were available regarding behavioral data and psychological assessment history, review of developmental history, and review of behavioral data that was collected daily by direct support staff within his home. Behavioral data collected included the frequency, duration, and intensity of behaviors, antecedents of behavior, consequences of behavior, detailed narrative of behavior, strategies utilized to deescalate the behavior, Charles' response to strategies, and any other strategies utilized to get Charles to return to his baseline. Behavioral and occupational assessment data hypothesized that he was seeking vestibular input through engaging in head banging. Head banging in individuals with autism can be linked to sensory processing differences, particularly within the vestibular system, which regulates balance and spatial orientation. Some individuals might seek out the proprioceptive and vestibular input provided by head banging to regulate sensory input, either to calm down or to stimulate themselves when under stimulated; others might use it as a form of communication, to express frustration, anxiety, or a need for attention. In Charles' case, this would align with his diagnosis of stereotypic movement disorder. Behavioral data suggested that he would exhibit said behaviors in response to stress, frustration, boredom, or sensory overload.

Initially, Charles moved into a one-person home with 1:1 staffing with what were thought to be appropriate modifications to the home for safety, including single layer padding on the walls, door chimes, corner protectors, accessible bathroom, and sensory items. Shortly after Charles' move into PDS' home, PDS received additional information from his previous placement that Charles was head banging over 3000 times a month and it was evident through the review of behavioral data mentioned above that the extent of his behavior was not conveyed during his

time of transition from the RTF. It became increasingly evident that the level of modifications to the home was in no way adequate. Due to the severity of his self-injurious behavior, his home was further modified to ensure his health and safety. All modifications were recommended by a licensed OT and behavior specialist and made in conjunction with Charles and his family so that the home became a sensory-friendly environment completely tailored to Charles' wants and needs to better his quality of life and to ensure safety. All the hard furniture was removed from the home and replaced with soft, cushioned seating such as a giant love sac, a vibrating chair, and vibrating floor mats. PDS crafted specialized tables that were installed within the walls that would fold down so that this was to be only available when being utilized. This made sure that any surfaces that Charles may use to engage in self-injury would not be readily accessible. A soft, cloth sensory swing was placed in his living room for engagement to prevent boredom which could trigger further SIB. The floors of the home were modified with the addition of two-inch padding underneath the carpet throughout the entire home, excluding the bathroom. In the bathroom, the floors were covered with water resistant padding to further ensure Charles' safety. Padding was also placed on the walls and ceilings. A specialized, padded wardrobe was built into the wall. Additional outdoor sensory activities were installed, including a swing set, blow-up sensory toys, and interactive games. Staff received extensive medical and behavioral training, including how to utilize items within Charles' sensory diet to reduce occasions of self-injury. PDS decided the best course of action was to hire more staff and require additional training and certifications to improve the quality of supports within the home. Behavioral technicians were hired for every shift, the staff within the home were required to become certified through the National Association of Dual Diagnosis, and a master's level behavior specialist was hired to be the home manager for in-home behavioral supports. To further empower Charles and improve his

quality of life, there was a transition from Picture Exchange Communication System (PECS) to Proloquo. Proloquo is a symbol-supported, Augmentative and Alternative Communication (AAC) app used by individuals with limited or no speech to communicate. It provides a voice for non-verbal users by allowing them to tap symbols and words on a device, which are then spoken by natural-sounding text-to-speech voices. PDS felt the transition from PECS to Proloquo was necessary to give Charles power and his own voice. PDS collaborated with Temple University's College of Education and Human Development team for additional staff training on implementation of Proloquo and how to best assist staff when working with Charles to improve communication skills and further lessen the likelihood of SIB due to a communication deficit.

Conclusion

A collaborative team of cultivated specialists created a “wish list” home and environment for Charles, focused on safety and a specialized sensory diet. Team meetings were held weekly while designing the plan and weekly meetings have continued since the plan was implemented. Updates to the plan are made as needed, keeping the team informed of any changes deemed necessary to ensure everyone is on the same page and gives the best support possible. Taking a person-centered approach in addressing Charles' needs and safety proved to be integral in the overall success of the environmental modifications. His environment was designed to his specific wants and needs. Charles now navigates his own home and property with precision because of the environmental modifications that were implemented. His overall quality of life and safety has been maximized. There are endless possibilities when the proper, specialized environmental modifications are put into place.

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Biography

Carly Staples is the Chief Administrative Officer at Person Directed Supports, Inc. She has a master's degree in special education and applied behavior analysis from East Stroudsburg University of Pennsylvania. She has been working within the education and human services fields for 15 years. She has four wonderful children. They enjoy being outdoors, traveling, and watching their favorite Disney movies together.

Building Better Lives: Futures Community Support Services, Inc**Victoria Ace and Nicole Bordas**

Futures Community Support Services, Inc. is a nonprofit organization dedicated to empowering individuals with autism or developmental disabilities to live lives that are connected, meaningful, and full of purpose. We believe every individual deserves the opportunity to reach their fullest potential and experience meaningful independence in their daily life, a belief that is reflected in our mission statement. Through the creativity of our staff and teams, we have enhanced the environment in which our individuals are supported and live. Futures offers a wide range of individualized services designed to support people based on their unique needs and living situations. This may include individuals living independently in their own apartments, those in 24/7 supervised community living arrangements, or individuals residing in supportive families through lifesharing. Futures currently operates 14 community living arrangements and supports dozens of individuals in other settings.

Futures has completed environmental modifications within our residential-based programs that enhance physical safety and independence based on individual needs. For some individuals who are fall risks or have a history of leaving their beds, electronic floor mats are utilized to alert for a timelier response by staff. Assistive technology such as sleep mats has also been implemented for those who have a history of mental health conditions, insomnia, or other sleep-related concerns. Futures collected data for an individual which led to physician diagnosing sleep apnea and enhanced the medical care for overall improved health and safety. In some homes with increased behavioral concerns, vinyl or PVC wall panels, also known as milk board walls, have been put in place. The use of the milk board walls is an inconspicuous modification that allows the home to continue to feel comfortable while reducing physical damage during behavioral

events. Some additional environmental modifications include the use of a sensor-powered garbage can so everyone residing in a home is able to use it without worrying about being unable to lift a lid, push a button, or tap a tab with their foot. Smaller items purchased to modify the environment and enhance independence and safety include safety knives and gloves used when individuals are learning to cook or simply choosing to assist staff with meal preparation.

Due to the varying populations, sensory-related modifications have been paramount to the success of the individuals served at Futures. Homes that support individuals with sensory-related issues have rectangular swings that provide the option for laying down, sitting up, or if desired safely swinging into the air themselves. In addition, small trampolines, water tables, and sensory cocoons are used. While it may take some time for individuals to learn about and understand how to use certain sensory items specific to their unique needs, other sensory-related items are usable right away, such as aromatherapy (essential oils), fidgets, drums, shakers, weighted vests and items for the wrists and ankles. One of the most creative uses of weighted items for sensory-related issues was the purchase of a weighted ball cap. An individual had the need for items on the top of the head for pressure. They found no relief until this was purchased.

Creative communication has been a consistent and key modification for all individuals being supported by Futures. The creativity does not stop at simple communication cards, although these are used for some individuals. In one home, communication cards specific to the area of the home were printed and posted in that area, but rather than showing simple clip art or a googled picture, images of the exact item desired in the home were used. In another home, the communication cards are magnets on the refrigerator where the individual can slide the preferred food over in order to communicate.

Several individuals are in possession of communication devices and applications on their tablets that provide verbal responses based on their choices. Futures clinical team provides individualized communication support to include teaching sign language and developing social stories.

For individuals with more challenging behaviors, specialized programs and planning are conducted to meet their needs. A partition has been added to an agency vehicle to provide an individual who has been unsafe during transport the opportunity to be back in the community. Futures provides individuals the opportunity to grow by gardening through the use of safe tools and pottery. For those individuals who are not poison/toxin safe, non-toxic items that allow them to feel less restricted and full access such as deodorants, lotions, etc. are purchased for them. In addition to the in-house clinical team that is able to provide mental health and trauma-informed therapies as well as behavioral support, Futures gives all individuals the opportunity to move into more unconventional therapies such as music therapy and volunteering with animals. The availability of such services provides individuals with a more customized, consistent, and comfortable experience while navigating through their needs.

Biographies

Victoria Ace has held a variety of roles within Futures, beginning her journey as a direct support professional and now serving as the Clinical Supervisor. In her current role, she leads the clinical team, which includes the agency nurse, and the behavior support professional. Victoria plays a vital role in organizing and implementing initiatives that promote both mental and physical health. She also provides individual and group-based therapeutic services, supporting the overall wellbeing of those served by the agency.

Nicole Bordas oversees a variety of programs at Futures, including supported living, lifesharing, and community living arrangements. She provides leadership and guidance to her team that run the programs, ensuring that services are aligned with the regulatory requirements and standards. With a diverse background across multiple service areas, Nicole brings valuable insight and creative problem-solving to her role.

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Transforming Lives with Technology

Stephanie Williams, LCSW

As a residential provider, we are frequently called to think outside the box when it comes to delivering services in a person-centered environment and in a way that fosters true independence and autonomy, not just the illusion of it. Many of the things that you or I control daily, individuals in services cannot control. For example, you or I would get to choose who we live with or if we'd like to live alone. We would be able to dictate who we let into our homes, and most likely, would not be required to have another person monitoring us 24/7. With our freedom, we would not have daily documentation completed for us about the bad mood we experienced or the medication we didn't want to take. As residential providers, we frequently face these situations that cause a multitude of challenging behaviors. So, what do we do about this? How do you change behavior when the function of the behavior is to escape from the services themselves? The answer is independence. But independence is not always easy to achieve. It sounds easy, when we say, "our goal is to provide individuals in services with an everyday life," but how many providers truly do that?

One of the biggest dilemmas we experience in this difficult, yet meaningful pursuit is balancing risk with self-determination and autonomy. The best way to illustrate this idea in action and demonstrate the core philosophy of our agency is through an example. For this purpose, the name of the individual has been changed to maintain confidentiality, but the circumstances and outcomes are real.

Meet Mike: Mike is 24 years old and has lived in residential services for the last six years. Mike is an exceptionally intuitive young man with a loquacious nature. He enjoys, quite frankly, what a lot of other 24-year-old young men enjoy. Mike wants to go to the bar for a beer, play video

games all night, make content for YouTube, start his own business, banter with friends, and have his girlfriend live with him. However, over the last several years, all those typical desires have made it difficult to support Mike in a traditional three-person community living arrangement, due to the inherent restrictiveness of the setting compared to living without services. Mike is also very self-conscious about telling others he lives in a CLA and that he has support staff. He is embarrassed, to say the least, which is understandable when you put yourself in his shoes.

Over the years, Mike has been the topic of many interdisciplinary meetings due to the challenges his behavior was presenting, such as false allegations toward staff and housemates, eloping from the home, property destruction, verbal aggression and disrespect toward community members, and discontinuing services altogether with no stable plan for living. Due to the behavior, he was moved to several different homes and eventually ended up with 1:1 support in a one-person CLA. The team continued to try to modify the environment and external stimuli, but outcomes did not improve as intended, and the power struggle continued. Mike continued to feel like a “prisoner to the state,” despite the attempts to incorporate new strategies, being offered a variety of opportunities to thrive, and an increase in his supports. Why? Because the solutions being offered did not meet his need and desire for autonomy and independence, therefore, the behaviors did not decrease. The more supports we offered, the more the behaviors increased in frequency, duration, and intensity.

Following a critical incident in which Mike was charged with harassment, which lead to being involuntarily admitted for psychiatric care, and having a PFA placed against him, we decided to take the opposite, more “risky” approach and give Mike as much freedom and independence as possible. We chose to honor his desire for autonomy and self-determination even though it was risky to remove physical staffing. The team worked together to incorporate remote support

services for Mike, which included audio/visual cameras, sensors, geolocation watch, and a two-way communication tablet. Remote supports provided Mike with the independence and autonomy that he so desperately desired. Although there was a lot of rightfully-placed hesitation leading up to the implementation, the team agreed that all other traditional options had been exhausted.

Within two weeks, the challenging behavior we had been seeing for six years had dropped by almost 85%. Mike seemed like a whole new man! His overall mood improved drastically, and his willingness to practice and engage in prosocial behavior increased. He began to take responsibility for his own physical well-being and didn't rely on his "slaves" (direct support staff) to meet his needs nor to protect him from natural consequences he may encounter. Mike continues to thrive, and his story is a testament to the importance and impact of truly practicing what we preach about an everyday life and the idea of respecting self-determination, even if it is risky. If provider teams can balance risk versus autonomy with creative solutions like remote supports, we can impact the hearts and minds of individuals in our care more than we ever thought possible.

As a provider agency, it would be easy to turn away all the individuals who are complex and require creative solutions, but in reality, that is not what is needed. We live in a world with people, and people are complex to say the least. People are more than their diagnosis and their challenging behavior. Understanding and implementing creative and self-determined supports should be the goal of every agency and every support team, however we still have a lot of work to do to make creative solutions the norm.

Biography

Stephanie Williams is a Licensed Clinical Social Worker and is the Executive and Clinical Director at Independent Living LLC, a residential provider agency operating in Luzerne County. She has 11 years of experience providing services to adults with IDD/autism. Stephanie's professional interests include promoting person-centered, ethical, and sustainable approaches within residential settings, with a specific focus on developing autonomy and self-determination.

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