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Haley Wilson

Western Michigan University, haleywilson2120161@aol.com

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Mental Health Inpatient Hospitalization: What Nursing Can Learn from “Sensory Rooms.”

Haley Wilson

Western Michigan University

Bronson School of Nursing

Mental Health Inpatient Hospitalization: What Nursing Can Learn from “Sensory Rooms.”

Mr. Johnson has just arrived by ambulance to the front door of an inpatient mental health unit after spending three days in the hospital following a serious suicide attempt. He is anxious, disoriented, and increasingly agitated. All of his personal belongings, including his shoelaces have been taken away. He had been expecting to go home, not here. Luckily for Mr. Johnson, he is placed in the hands of a caring and competent Registered Nurse, Lucy. Nurse Lucy takes Mr. Johnson to a private room on the unit to talk. After introducing herself and conducting a basic interview, Lucy practices *trauma-informed care*, a therapeutic response grounded in understanding the impact of trauma, by asking Mr. Johnson if he has any history of trauma. Luckily a strong patient-provider relationship had been established, and Mr. Johnson was comfortable enough to share his history of sexual abuse. Nurse Lucy and Mr. Johnson then developed a *safety plan*—a resource used to prevent and de-escalate mental health crises. Mr. Johnson shared that people coming into his room unannounced made him very upset, and that listening to music was a positive coping skill he used when feeling anxious. While providing a tour of the *milieu*, or therapeutic environment, nurse Lucy made sure to introduce Mr. Johnson to the *sensory room* – a place where he could use a variety tools to relax and supplement his healing process. This fictional representation of a patient experiencing inpatient hospitalization for the first time sets the stage for how sensory rooms can impact patient care.

The purpose of this undergraduate thesis is to explore the use of sensory rooms in the inpatient psychiatric care setting. Background information will be given regarding current mental health statistics within the United States (U.S.), inpatient hospitalization terms and practices, and the history and development of sensory rooms. Common themes among current literature will be addressed and include: impact on seclusion and restraint, management of psychiatric symptoms,

and perspectives of staff and patients. Implications for nursing practice will be discussed and include current research limitations and future recommendations.

## **Background**

### **Mental Health Statistics**

Mental illness is a serious issue that does not get talked about enough. One in five, or 19.6% of U.S. adults, experienced mental illness in 2018 (Substance Abuse and Mental Health Services Administration (SAMHSA), 2019). One in twenty-five, or 4.6%, experienced serious mental illness (SAMHSA, 2019). Serious mental illness can be defined as any mental, behavioral, or emotional disorder that severely limits one or more major life activities (SAMHSA, 2019). Suicide rates are an alarming result of serious mental health issues. According to the National Institute of Mental Health (NIH, 2019) suicide is the tenth leading cause of death overall in the U.S. and the second leading cause among those ages 10-34. It is imperative that the U.S. maintains and further develops safe, patient-orientated, inpatient care to meet the mental health care needs these individuals.

### **Inpatient Hospitalization**

SAMHSA (2019) conducted a census on April 30<sup>th</sup>, 2018 that revealed 129,115 people in the U.S. were receiving mental health treatment services in an inpatient setting. Inpatient hospitalization is limited to patients who pose a risk to harming themselves or others, or who are extremely disabled and require continual care (Halter, 2018). The majority of patients receiving acute inpatient care are referred from emergency rooms or crisis intervention services (Halter, 2018). Patients are likely stressed, disorientated, and/or agitated by the time of their arrival to an inpatient unit. It is important that an appropriate setting be established to handle the specific care needs of patients requiring inpatient hospitalization.

**Milieu**

The French word “milieu” can be used to describe the surroundings and physical environment of a place. Hildegard Peplau coined the term “therapeutic milieu” to also include the people, setting, structure, and emotional climate of a healing environment (Halter, 2018). A well-managed milieu provides a sense of safety and promotes healing, as well as offers structure in the form of activities and rules (Halter, 2018). Inpatient psychiatric units may be small or large, locked or unlocked, or cater to specific populations (Halter, 2018). Child and Adolescent, adult, geriatric, forensic, neuropsychiatry, and psychiatric intensive care units are examples of specialized units where sensory room studies have been initiated. Patient safety is the top priority for any therapeutic milieu.

**Seclusion and Restraint Practices**

Patients may become violent towards themselves or others during a behavioral crisis, which often proceeds through predictable stages (Halter, 2018). Unit staff are intensively trained to identify, prevent, and manage these crises. When preventative measures fail, rapid initiation of planned behavioral intervention strategies take place (Halter, 2018). Such measures are usually performed by nursing staff and reinforced by a doctor's order. Restraint, seclusion, and emergency medications are always used as a last resort (Halter, 2018; SAMHSA, 2010). SAMHSA (2010) defines restraint as: “any manual method, physical or mechanical device, material, or equipment that immobilizes or reduces the ability of a person to move his or her arms, legs, body, or head freely” (p. 2). Sedative medications, such as benzodiazepines, are also used as a form of restraint and are often referred to as “chemical restraints” (Halter, 2018). SAMHSA (2010) defines seclusion as: “the involuntary confinement of a person alone in a room

or area from which the person is physically prevented from leaving” (p. 2). Restraints used for medical procedures or orthopedic support are excluded from the definition of “restraint”.

There has been an increasing trend in the idea that these practices should be reduced or entirely eliminated. SAMHSA (2010) stated “the use of seclusion and restraint is a result of treatment failure” (p. 1) and initiated a five-point national plan to reduce, and in some cases eliminate, the use of these practices. Several recent studies have focused on the idea of using sensory rooms to reduce the frequency of seclusion and restraint in inpatient facilities (Andersen, Sippel, & Stenager, 2017; Bobier et al., 2015; Chalmers, Harrison, Mollison, Molloy & Grey, 2012; Champagne & Stromberg, 2004; Cummings, Grandfield, & Coldwell, 2010; Lloyd, King, & Machingura, 2014; Maguire, Young, & Martin., 2012; Novak, Scanlan, McCaul, MacDonald & Clarke, 2012; Seckman et al., 2017; Sivak, 2012; Smith & Jones, 2014; West, Melvin, & McNamara & Gordon, 2017), and one study completely eliminated their use (Barton, Johnson, & Price, 2009).

### **Trauma-Informed Care**

Trauma-informed care focuses on eliminating the use of seclusion and restraint (Halter, 2018). This concept identifies that patients who frequently display disruptive behaviors may have histories of violence and victimization (Halter, 2018). A trauma informed program realizes the prominence of trauma, recognizes its signs and symptoms, and actively resists re-traumatization (SAMHSA, 2010). A patient’s traumatic history may impede their self-soothing abilities, cause them to develop unhealthy coping mechanisms, and make them more vulnerable to seclusion and restraint practices (Halter, 2018). Trauma-informed care relies on careful assessment, typically performed by nursing staff, focusing on a patient’s history and how it relates to their current life (Halter, 2018). Establishing a trusting patient-provider relationship is essential to the

development of trauma-informed care. One aspect of trauma-informed care may include a nurse working with a patient to develop a safety plan.

### **Safety Plan**

A safety plan typically includes information regarding warning signs a crisis may be developing, coping strategies, and support persons (Halter, 2018). Patients may include the use of a sensory room as part of their safety plan. Sensory room use has been found to promote self-coping (Wiglessworth & Farnworth 2016) and empower patients (Lindberg, Sameulsson, Pereius, Bjorkdahl, 2019; Barbaric et al., 2019). Exploring patient-provider relationships has also been a topic of interest for some sensory room studies (Sutton, Wilson, Van Kessel & Vanderpyl, 2013; Wigleworth, & Farnworth, 2016; Seckman et al., 2017).

### **History and Development of the “Sensory Room”**

Current studies in the field of neuroscience have provided a clearer view as to how people with mental illness process sensory information differently, and what can be done to improve their outcomes. Bailliard and Whigham (2017) conducted a scoping review including 149 studies that looked at sensory processing and mental illness. The study confirmed that adults with mental illness experience atypical sensory processing which can lead to impaired social cognition and participation, task attention, and self-regulation. Their research suggests that interventions targeting sensory processing skills, such as sensory rooms, may contribute to cognitive gains and improved occupational performance (Bailliard & Whigham, 2017).

Sensory rooms, also called comfort rooms, or sensory modulation rooms, are typically used in the inpatient or residential setting. The visual, auditory, tactile, olfactory (smell), gustatory (taste), vestibular (balance), and proprioceptive (position of the body) senses are targeted with a wide variety of “tools” aimed at stimulating one or more senses

at a time. Sensory rooms and their tools can be as unique as the patients who use them. Of the studies included in this review, Knight, Adkison, and Kovach (2010) seemed to include the most diverse options for patient's including: aromas, sweet and sour candies, colored eyeglasses, kaleidoscopes, lava lamps, music, rocking or gliding chairs, scented candles, stress balls, sand tables, wall images, and weighted blankets.

Jean Ayres, a well-known American occupational therapist and educational psychologist, became famous for her groundbreaking development of a theoretical framework within sensory integration theory (Champagne & Stromberg, 2004). She dedicated her work to helping children with learning and behavioral challenges by examining the relationship between neuroscience and sensorimotor deficits, and how they affected learning and behavior (Lane et al., 2019). Lorna Jayne King adapted Ayers approach and applied it to individuals with schizophrenia, in the hopes of treating their presumed sensory processing disorders (Scalan & Novak, 2015).

It was not until 1975 that the first multi-sensory room was developed for people with profound mental and physical limitations, in the Netherlands, by Jan Hulsegge and Ad verheul (Champagne & Stromberg, 2004). They coined the term "Snoezelen" for their specific therapeutic approach which is a combination of the Dutch verbs "Snuffelen" (to seek and explore) and "doezelen" (to relax) (Snoezelen, 2020). Today, Snoezelen has been used in a variety of environments including schools, hospitals, long term care facilities, mental health facilities, community centers, rehabilitation centers, and even personal homes (Snoezelen, 2020). This approach has benefited many people including children, adults, and the elderly, as well as those experiencing behavioral challenges, learning disabilities, mental health issues, autism, and traumatic brain injuries (Snoezelen, 2020).



Tina Champagne, an American occupational therapist, has greatly contributed to the application of sensory rooms in the U.S., particularly in the realm of inpatient mental health. Her original study conducted in 2003, reported a 40% decrease in the use of restraints in a 24-bed locked psychiatric unit, after her implementation of a sensory room (Champagne, 2003). Champagne, Mullen, Dickson, and Krishnamurty (2015) also discussed the safety and effectiveness of the weighted blanket as a sensory intervention for adults in the inpatient psychiatric setting.

Knight et al. (2010) provides a thought provoking and insightful description of what a sensory room can mean for some: “In this safe and failure-free space, individuals choose what to use or explore, thus diminishing the helplessness that often accompanies illness, disability, and hospitalization” (p. 26). Sensory rooms can ultimately help individuals optimize their states of arousal by calming, or alerting them (Bobier et al., 2015). Sensory approaches are non-invasive and allow individuals to self-direct their thoughts and behaviors as well as experience empowerment (Scanlan & Novak, 2015). The use of sensory interventions supports a recovery-orientated and trauma-informed practice (Scanlan & Novak, 2015). Sensory rooms accommodate individuals accompanied by trained staff such as occupational therapists, nurses, or aids. Seckman et al. (2017) noted that when patients are accompanied in the room it allows providers to build rapport and remain open to the venting of emotions. The rooms can also be used for group therapy sessions (Smith & Jones, 2014), and rarely patients have been allowed access to these rooms by themselves (Cummings et al., 2010; Bjorkdahl, Perseius, Samuelsson & Lindberg, 2016; Forsyth & Trevarrow, 2018). Patient safety remains a key area of focus in these circumstances.

### **Literature Review**

The majority of sensory room studies conducted in inpatient settings have focused on adult populations. Child and adolescent, geriatric, and mixed population studies have also been researched. Most studies reviewed were completed in the U.S. and Australia. Sweden, the United Kingdom, Canada, New Zealand, and Denmark also provided insight. Nursing journals have published the greatest number of studies, followed by occupation therapy journals, and psychiatric journals. There are three primary areas of focus surrounding these studies: how sensory rooms impact the frequency of seclusion and restraint practices, how sensory rooms can help manage specific psychiatric symptoms, and perspectives of staff and patients regarding sensory room use.

#### **Impact on Seclusion and Restraint**

A scoping review, published by Scanlan and Novak (2015), compared the effectiveness of sensory approaches designed for individuals experiencing mental illness. Of the 17 studies included in their review, nine focused on changes in the frequency of seclusion and restraint practices. Several studies reported a decrease in the use of these interventions (Barton et al., 2009; Champagne & Stromberg, 2004; Lloyd et al., 2014; Maguire et al., 2012; Sivak, 2012), while others reported no change (Chalmers et al., 2012; Cummings et al., 2010; Novak et al., 2012), and one reported an increase (Smith & Jones, 2014). All nine studies were conducted in the inpatient setting and utilized sensory modulation, sensory rooms, or comfort rooms specifically. Since Scanlan and Novak's (2015) scoping review, there have been additional studies published regarding sensory rooms and their impact on restraint and seclusion episodes.

Bobier et al. (2015) conducted their sensory modulation intervention study in New Zealand on a 16-bed child and adolescent unit. They reviewed the rates of restraint and seclusion

separately for six months prior to implementing their sensory room, six months during implementation, and six months following. During implementation, a total of 23 patients used the sensory modulation room 43 times. Interestingly, 19 users were female (79.2%), and only four were male (16.7%). Patients who used the room did so on average of two times during their hospitalization, for an average of 35 minutes each session. A longer length of stay (mean 48 days) was reported for patients using the sensory room, versus those who did not (average 18.21 days). Seclusion rates were found to decrease from 3.2 per 100 treatment days, during the six months prior to implementation, to 1.8 per 100 treatment days during the study period. Six months following the intervention, seclusion rates dropped further to 1.4 per 100 treatment days. The instances of full restraint decreased slightly during intervention, and six months following, whereas instances of partial restraint significantly increased.

Seckman et al. (2017) conducted their study on a 20-bed child and adolescent unit in the U.S. Thirty-six youth used the sensory room sixty-five times on average of 20.77 minutes per session. Seclusion and restraint data were evaluated for six months prior to and six months following the sensory room intervention. A 26.5% restraint reduction and a 32.8% seclusion reduction was reported. However, the duration of seclusion increased by 17%, as did the duration of restraint by 31%. The authors attribute this finding to “high utilizers” of restraint and seclusion—youth who experienced two or more episodes of restraint or seclusion in any given month. For the month of August, three patients accounted for 58% of all restraint and seclusion episodes. In December, two patients accounted for 66% of all restraint and seclusion episodes.

Various sensory modulation training and interventions, including a sensory room, were implemented on a 17-bed adult open psychiatric unit in Denmark (Andersen et al., 2017). Another 17-bed open unit in the same hospital was used as a control. After one year of collecting

data, the use of forced medication and belt restraints were reduced by 42% in the project unit, compared to the control unit. However, when the rate of belt restraints and forced medications were looked at separately, the results failed to reach a level of statistical significance.

West et al. (2017) compared seclusion rates 12 months prior to and 12 months after implementing a sensory room on a 20-bed adolescent unit in Australia. In the 12 months prior to introducing the sensory room, 50 adolescents were secluded. Sixty-five youth were secluded in the following 12 months. Ultimately, seclusion rates did not decrease following the introduction of a sensory room on this unit.

### **Management of Psychiatric Symptoms**

Scanlan and Novak's (2015) scoping review explored consumers' self-rated distress for several inpatient sensory room studies. Most studies required patients to report their stress levels before and after a sensory room intervention (Chalmers et al., 2012; Champagne & Stromberg, 2004; Cummings et al., 2010; Lloyd et al., 2014; Novak et al., 2012; Sivak, 2012). All studies indicated that patients experienced reductions in distress, typically around 85%, following the use of a sensory room. Sivak's (2012) results were open to more than one interpretation. Five of the 13 sensory room users (38%) reported an increase in distress although they also reported the room to be helpful (Sivak, 2012).

Knight et al. (2010) utilized a general psychiatric unit and a geriatric neuropsychiatry unit to determine if multisensory therapies could help manage specific psychiatric symptoms and evaluate how the multisensory therapies compared to more traditional ones. The traditional intervention group was comprised of 36 patients (20 geriatric and 16 general). They were allowed interventions such as: quiet time, one-on-one staff time, pacing, or removal from stimulation. The sensory intervention group was comprised of 24 patients (11 geriatric and 13

general). They had access to various sensory tools including: aromas, candy, colored eyeglasses, music, rocking chairs, tactile stimulation, and weighted blankets. Sessions lasted approximately 20-30 minutes regardless of the group. Nursing staff implemented the Brief Psychiatric Rating Scale (BPRS), which measures 18 specific signs and symptoms of acute psychiatric disturbance, prior to and 30 minutes following intervention. Both groups showed significant reduction in anxiety, excitement, tension, uncooperativeness, hostility, conceptual disorganization, and depression. The sensory group also showed significant change in blunted affect, emotional withdrawal, and somatic concerns. Despite this, sensory interventions were found to be as effective as traditional interventions according to BPRS scores.

Sensory rooms were introduced on one youth and three adult units in New Zealand by Sutton et al. (2013). Semi-structured interviews were developed for both staff and service-users who utilized the sensory rooms. Forty staff (72.5% RN, 27.5% other), and twenty service users (90% female, 10% male) responded. The interviews revealed that the sensory room intervention was effective in reducing aggression and promoting recovery by facilitating a calm state, enhancing interpersonal engagement, and supporting self-management.

Mitchel et al. (2015) instituted a multisensory room intervention in a geriatric psychiatric unit in the U.S. Thirteen patients with dementia used the sensory room 32 times over the duration of the study. The Pittsburg Agitation Scale (PAS) was used prior to, immediately after, and one hour after sensory room intervention. The PAS measures agitation by allowing an observer to rate aberrant vocalizations, motor agitation, aggressiveness, and resistance to care (Mitchel et al., 2015). Patients were accompanied by a nurse and exposed to lavender aromatherapy, music, and dimmed lighting for 15 to 30 minutes while in the sensory room. Significant decreases occurred

in PAS scores, as well as all subcategories (excluding aggression), from pre-intervention through one-hour post intervention.

Wiglesworth and Farnworth (2016) reported data on patient distress in their sensory room study. It was conducted on a 10-bed female only forensic unit in Australia. Patient's termed the sensory room, the "Safe Space". It was built with the intention to promote freedom of access however, the presence of four ligature points (environmental features that can serve to promote strangulation) ensured that patients must be accompanied in the room. The Adult/Adolescent Sensory Profile assessment (SP) was utilized by an occupational therapist to evaluate individual patient preferences and responses to different sensory interventions. Nurses and occupational therapists used SP information to individualize sensory strategies. A sensory room evaluation form, that could be filled out by patients and/or staff members, was used prior to and following the intervention and recorded the following: sensory items used, duration of session, session initiated by patient or staff, stress rated on a 10-point scale before and after room use, and additional comments.

Also, during Wiglesworth and Farnsworth's (2016) study, eight patients used the sensory room a total of 50 times. Bean-bag chairs were the most frequently used items (58%) followed by ceiling lights (48%), and music (40%). Forty-seven of the fifty sessions reported a decrease in distress with a mean difference of -2 points on a 10-point Likert scale. There was a reported increase in stress levels during three sessions. In one of these sessions two patients and a staff member were using the room together. Comments recorded on the sensory room evaluation form captured feelings of jealousy and paranoia. The authors suggest carefully considering the impact on stress prior to allowing two patients to use the room concurrently. Time spent in the sensory room was between 5-120 minutes with an average of 35.36 minutes. Staff initiated use of the

sensory room 32 out of 50 sessions. Initial patient stress ratings were higher when staff-initiated use of the room ( $M= 6.06$ ), compared to patient-initiated sessions ( $M= 5.63$ ). A higher mean difference in stress was reported for patient-initiated sessions ( $M=-2.81$ ) compared to staff-initiated sessions ( $M=-2.66$ ).

Seckman et al. (2017) also researched patient aggression and distress in addition to reporting a reduction in seclusion and restraint. Aggressive behaviors included physical assault, attempted assault, threats, and destruction of property. A reduction of 16.4% of all aggression types (except destruction of property) were seen 6 months post sensory room intervention. Patient distress ratings were also recorded prior to and after using the sensory room. There was a significant decrease in mean distress ratings post intervention.

West et al. (2017) asked if guided sensory room use could reduce distress for adolescents, and what variables were associated with greater distress reduction following sensory room use. Fifty-six sensory room users were compared with fifty-six non-users from the same unit. 76.8% of all users were female. The Stepping Stones Sensory Room Questionnaire (SSSRQ), a study specific measure, reported client and clinician perceived stress on an 11-point Likert scale. The SSSRQ was used prior to and immediately following sensory room use. 94% of youth reported reductions in distress, compared with 89% of clinicians who perceived reduced stress levels. Adolescents with a history of aggression were defined as: those who have harmed others or animals, damaged property, shown abusive behavior. These patients experienced greater distress reduction following sensory room use. It is also worthy to note that females and those with anxiety disorders used the room more than males.

**Patient and Staff perspectives**

Smith and Jones (2014) introduced a sensory room into a male only 15-bed PICU in the United Kingdom to explore staff and patient experiences. To be included in the study, staff had to work on the unit prior to and after implementation of the sensory room. Patients also had to be on the unit before and after the sensory room was introduced, experience seclusion, and use the sensory room to be a part of the study. A total of 17 people (10 staff members and 7 patients) participated in the interview process 13 months after the intervention. Both staff and patients had a variety of positive things to say about the sensory room. Patients reported the room as a place to relax, reflect, and destress. Staff members mention it in relation to its “positive therapeutic effects”. Both parties liked that patients were able to utilize their own personal music preferences within the room. Staff and patients reported the sensory intervention to have an overall positive impact on the PICU. Most staff agreed the room was not appropriate for “highly aggressive” patients, and that seclusion and restraint should be available as a “last resort”. The majority of all participants thought the room had a positive impact on the development of staff-patient and patient-peer relationships. Although, one patient interviewed described the room as a place where cliques could form.

All clinical staff were provided training for a period of 12 months prior to the introduction of a sensory modulation intervention in the Bobier et al. (2015) study. Staff training included various education regarding how sensory modulation is currently used in mental health and its relevance to the child and adolescence population. Training also addressed staff’s own sensory needs, how to conduct sensory assessments, what sensory tools were available on the unit, and hospital and unit protocols/rules for documentation. Seventeen staff members responded to a survey prior to the initiation of the sensory modulation intervention. Respondents possessed a



good understanding regarding the concept of sensory modulation however, many requested more opportunities to practice the therapy. Most staff reported that the intervention would likely be an effective tool for their patients and should result in an overall positive impact on the unit. Staff also reported the sensory modulation room would likely increase positive patient-provider relationships and patient-centered care. Some staff mentioned the rooms potential to decrease needs for PRN (pro re nada or as needed) medications, restraint, and seclusion. Staff who practiced sensory modulation with patients prior to the survey indicated fiber optic lighting, weighted blankets, and lavender oil to be among the most used items.

Wiglesworth and Farnworth (2016) explored staff perspectives using a 30-minute focus group in addition to reporting data on patient distress. Four staff members from three different disciplines participated in the focus group. Overall, the “Safe Space” was considered a place where patients could escape the busy unit and experience a more calming environment essential for relaxation and de-escalation. Staff most frequently reported referring patients to the sensory room during periods of arousal or distress. The room was also used to teach positive coping mechanisms, promote relaxation, provide sensory input, aid in therapeutic relationship building, and support safety plans. Not all staff input regarding the sensory room was positive. Nature murals were initiated following staff concerns that the room possessed a “clinical feeling”. At times, noise from the seclusion room, which was in close proximity to the “Safe Space”, reportedly interrupted patient relaxation. Although staff understood the necessity for supervision due to safety reasons, some expressed that it deprived patients of potential moments for self-initiation and independence.

Bjorkdahl et al. (2016) evaluated the sensory room experiences of 126 staff members (96% nurses), from nine different inpatient psychiatric units in Stockholm, Sweden, using a web-based

questionnaire. Subgroup a (n= 54) included three units where sensory rooms had been initiated for at least one year. They were given a 12-item questionnaire comprised of nine open-ended and three closed questions. Subgroup b (n= 72) included six units and only recently had sensory rooms installed. Their questionnaire included three open-ended questions focusing on expectations and fears. Closed ended question results from subgroup a found that: staff initiated sensory room use the majority of times, the effects of the rooms on patients were largely positive, and the wards had experienced overall positive effects from initiation of the rooms. Qualitative analysis of open-ended questions from both subgroups combined resulted in three main categories: hopes and concerns, focusing on patients' self-care, and the room as a sanctuary. Many staff members thought of the rooms as exciting and innovative tools that would not only assist patient's with their well-being and emotional self-care, but also further the nursing profession. Common concerns were that the ward could become more crowded, art and music therapies might get less attention, the rooms could be a burden on staff, and patient anxiety and self-harm might increase after using the rooms. In facilitating patient self-care, the rooms were found to prevent patients' emotional distress, decrease coercive interventions, improve independence, and strengthen self-esteem. At times, thoughts of self-harm, panic, claustrophobic experiences, and overwhelming emotional reactions were seen in patients using the rooms. As a sanctuary, the rooms were largely successful in facilitating a calm and peaceful ward environment that promoted positive well-being and confidence among staff and patients alike.

Service users from an 18-bed adult male acute psychiatric ward in the United Kingdom termed their sensory room the "Chill Out Room" (Forsyth & Trevarrow, 2018). Staff members were trained to become aware of individual sensory preferences and shown specific sensory strategies to support emotional regulation prior to the introduction of the room. Patients were

allowed to use the room independently based on acuity and staff were also encouraged to use it on breaks or after distressing incidents. Semi-structured interviews captured the views of six staff members (one occupational therapist, three registered nurses, an activity worker, and one clinical nurse manager). Three themes related to de-escalation, sensory interventions, and impact on staff emerged from the data. The room allowed service users time and space to express their needs and was also found to promote problem clarification between staff and service users. Staff mentioned that the variety of sensory equipment seemed to help patients experiencing voices, emotional distress, agitation, and anxiety. The room also helped staff members attend to their own sensory needs and develop a sense of control following serious incidents.

Lindberg et al. (2019) interviewed 28 patients (ages 15-64) from 10 psychiatric inpatient wards in five different Swedish hospitals. Sensory rooms were available for patients 24 hours a day under three conditions: only one patient was allowed in at a time, room use was completely voluntary, and patients could use the room unsupervised or be accompanied by a nurse based on acuity. A short questionnaire was given to patients following each sensory room use, including a space for comments. Nineteen patients completed the comment section, six completed the comment section and participated in the interviews, and three participated in interviews only. Interviews were conducted approximately one month following patient discharge and were completed face to face (n=4) or by telephone (n=5). Four categories emerged from the comment section of the questionnaires and patient interviews: emotional calm, bodily calm, empowerment, and unexpected effects. Most patients associated the room with feelings of pleasure, harmony, peace, positivity, and joy. In contrast, few patients were triggered or bored with the sensory room. Some reported relief from muscle tension and tinnitus while others experienced deep physical relaxation—a state resembling sleep. Patients reported feelings of trust and validation

by being able to use the rooms themselves, which lead to increased self-esteem and self-determination. Many participants were surprised by how well the room worked to quell anxiety.

Barbic et al. (2019) conducted semi-structured interviews with ten adult service users and nine health providers (four occupational therapists and five nurses), regarding their experiences with sensory modulation rooms (SMR), on three acute inpatient units in a Canadian hospital. Four common themes emerged from patient and provider interviews: service user empowerment through self-management, emotional regulation, an alternative to current practices, and health provider and service user education. Both groups of participants expressed the SMR to be a successful method in helping patients gain control over their health care. Patients experiencing over-aroused states were thought to benefit from using the SMR. The SMR was thought to be an effective alternative to the use of chemical restraints, PRN medications, and seclusion. Further education regarding the SMR and sensory-based interventions was indicated by both patients and providers.

### **Discussion**

While the concept of sensory rooms may seem novel, sensory stimulation is an integral part of daily life affecting how well individuals interact with their environment. Many studies in the field of neuroscience provide confirmation that adults with mental illness experience atypical sensory processing; cognitive gains and improved occupational performance can be attained through interventions targeting sensory processing skills (Bailliard & Whigham, 2017). Sensory rooms enable a variety of patients to experience the positive effects of sensory modulation therapy. Studies indicate that sensory rooms may be effective methods in inpatient psychiatric settings to reduce the practices of seclusion and restraint and help patients manage their psychiatric symptoms. Few negative effects have been attributed to the use of sensory rooms in

this setting. Quantitative and qualitative methods have been used to capture these ideas.

Unfortunately, the majority of current studies have been conducted with few participants and were subject to substantial bias. Further research is needed to better understand the full potential of sensory room use in the inpatient psychiatric care setting.

### **Current Research Limitations**

The majority of sensory room studies have focused on adult populations in the U.S. To benefit a greater diversity of people with mental health diagnoses, it is imperative that additional research be conducted in the child, adolescent, and older adult populations. Cultural implications of the therapy could be better understood if more countries added to research in this field. The effects of sensory rooms on certain mental health diagnoses is also poorly represented in the literature. Many studies reported the diagnoses of patients using sensory rooms however, Mitchel et al. (2015) was the only one to report the effects of a sensory room on patients with a specific diagnosis – dementia. Patient confidentiality would need to be carefully considered prior to conducting research on the effects of sensory rooms for certain mental health diagnoses.

Like snowflakes, each sensory room is unique, making it difficult to attribute certain interventions to specific outcomes. Detailed research regarding which items were used in a sensory room session, followed by the outcome, may provide insight on the potential of using two or more specific sensory items concurrently. The length of sensory room sessions has also been a topic of debate. An average of 20-35 minutes was frequently reported in the literature however, there is no research to support whether or not this is the most effective length of time. It is reasonable to conclude that shorter sessions are preferred in the inpatient setting due to staffing restrictions. To better understand how time impacts sensory room therapy sessions, appropriate resources would need to be allocated in future research. Wiglesworth and Farnsworth's (2016)

study indicated the location of a sensory room on the unit can impact its overall effectiveness as well. Careful consideration should be made in future studies, regarding the location and setup of sensory rooms, to ensure the safety and security of patients while limiting the potential for undue distress.

Patients have been permitted to use sensory rooms individually, in groups, or accompanied by trained professionals. Each of these circumstances presents a unique opportunity for further research, as well as potential concerns. Sensory rooms have been shown to improve patient provider relationships as well as patient empowerment however, a sheer lack of research on these effects leaves room for scrutiny. Additionally, the effects on peer to peer relationships among patients who use sensory rooms together is severely lacking and raises concerns about patient safety. Wigglesworth and Farnsworth's (2016) study identified feelings of paranoia and jealousy among patients who used sensory rooms together, and recommended careful consideration be taken prior to allowing patients to use sensory rooms together. Additional studies could determine if under the right circumstances sensory rooms are appropriate for facilitating peer to peer relationships.

Wigglesworth and Farnsworth (2016) reported that patient distress ratings decreased more on average if sensory room sessions were initiated by the patient, rather than a staff member. This phenomenon should be carefully monitored in the future as it may indicate the need for additional patient teaching and empowerment regarding sensory room use. If more patients are made aware of the presence of sensory rooms, how to use them, and their potential positive effects, they may be more likely to self-initiate their use and experience greater reductions in distress. Many studies report females to utilize sensory rooms more than males on average.

Finding out why this happens is important to finding out how more males can benefit from sensory modulation therapies.

### **Recommendations for Future Nursing Practice**

Although Occupational Therapists have set the groundwork for sensory modulation therapies, nurses have proven themselves critical in the development of the modern day “sensory room.” Nurses are at the forefront of providing safe and effective patient-centered-care. They have earned the right to be called our nations “most trusted professionals.” It is nurses and certified nurse’s assistants who accompany patient’s in sensory rooms most of the time. The majority of articles researching sensory rooms in the inpatient mental health setting have been published in nursing journals – a testimony of the professions dedication to promoting innovative evidence-based practice. There are many things nursing professionals can do to further promote sensory rooms.

One of the many responsibilities of a nurse is to be a researcher. By reading this thesis, any articles discussed within it, or entirely new research, nurses can provide themselves with the knowledge necessary to make a difference. Strategies used to share this knowledge could include discussing findings with other professionals, promoting the use of sensory rooms on a unit, or even assisting in the development of an entirely new sensory room. Nurses must work together and among other professionals to address the current limitations within this body of literature. While implementing new research, safety must remain the top priority when providing patient centered care.

In addition, nurses should work to help patient’s include this type of therapy in their daily lives. Inpatient hospitalization is not only serious but also temporary – appropriate measures should be taken to help promote positive coping mechanisms patients can use at home.

Furthermore, sensory rooms have been termed ineffective for “highly aggressive” individuals. Nursing professionals should feel motivated to finding a solution to this problem so that no one person is excluded from a potential chance to experience wellness. The way sensory rooms are currently operated may need to change in order to answer this question and now is the time for critical thinking and innovation.



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