A SENSORY ROOM PROTOCOL FOR SNF STAFF TO IMPROVE CONFIDENCE WITH EMOTIONAL REGULATION IN ADULTS WITH COGNITIVE CHALLENGES: THROUGH AN OCCUPATIONAL THERAPY PERSPECTIVE

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Abstract

Adult sensory rooms are an emerging area of practice for occupational therapy, as this holistic approach uses sensory tools for input to one or more of the five senses, which promotes emotional regulation in individuals seeking calming and alerting outcomes. This sensory protocol proposal was created to assist healthcare workers within a skilled nursing facility and provide a tool that could be utilized in various settings to increase awareness of adult sensory rooms.

Methodology

This quality improvement protocol project was conducted at Henderson Health and Rehabilitation to determine the need for and develop a protocol for an adult sensory room within a skilled nursing facility for adults with cognitive challenges to assist with emotional regulation. The second aim was to determine staff knowledge regarding sensory rooms and their uses. Pre survey of healthcare staff to determine baseline knowledge of sensory rooms, created a sensory room and observed residents in the room, protocol was developed and in-services and one on one training of staff with post survey to determine confidence levels and sensory room potential.

Results

Fifty healthcare workers (n=50) completed the pre-survey questionnaire, training, and post survey questionnaires. Four (n=4) residents were observed using the sensory room and their before and after use behaviors were captured. Sixteen healthcare workers (n=16) completed the post-survey, which identified that there were improvements in staff confidence regarding sensory room use.

Conclusion

An OTs lens is beneficial in creating sensory rooms within SNF facilities. Staff were open to using the sensory rooms as it supported the residents with cognitive challenges and increased their emotional regulation.

Keywords: sensory room, adults, cognitive challenges, skilled nursing facility

*Please refer to Appendix A for commonly utilized terminology throughout the paper.

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Dedication

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Chapter One: Introduction

As individuals age, and the body changes one thing remains the same, the use of the five senses. Through one or all the five senses, the body can regulate the various internal and external responses that can occur throughout the day, this is known as sensory integration (American Occupational Therapy Association [AOTA], 2023). Sensory integration is a way to organize sensations and mediate interactions between the nervous system, individual and the surrounding environment (Ayers, 2004). Sensory integration can be considered a scaffolding system for the individual, therefore attempting to disentangle ideas with occupations can become challenging (Ayers, 2004; Kilroy & Cermak, 2019). Sensory integration, when utilized as an intervention can promote optimal performance from the individual as sensory processing can be linked to social and reward processes necessary to perform at an adequate and appropriate behavior (Ayres, 2004; Kilroy & Cermak, 2019).

The American Occupational Therapy Association (AOTA) describes the importance of sensory integration for individuals to control and regulate their emotions (AOTA, 2023). Sensory rooms were designed to provide an environment to be navigated with ease for individuals with disabilities. As the idea and use of sensory rooms grew, the purpose of them also grew. Instead of the rooms being just to assist those with intellectual disabilities, research found that the purpose of sensory rooms can address more than just one type of disability/diagnosis (Ayers, 2004; Grace, 2020; Koziol et al., 2011). The design of a sensory room can be specific or broad depending on the ideal goal and purpose for the room to provide (Fowler, 2008). Sensory rooms could provide individuals with cognitive challenges in an environment that they can control, meaning that they can find the sensory tool(s) that assist their specific needs. When considering how to design a sensory room, understanding the intent of purpose within the sensory room will

provide ease of creation. This project had a purpose and goal to provide residents with an alternative intervention to help promote skills necessary to regulate emotions when feelings become overwhelming to express calmly.

Sensory rooms can provide individuals with a safe environment often identified as a sanctuary, where individuals can find solace and promote self-identified/controlled emotional regulation routines (Novak et al., 2012). In the 1970s, two Dutch therapists from the Netherlands, Ad Verheul and Jan Hulsegge, created the first sensory room, originally called Snoezelen® (Snoezelen®, n.d). The word "Snoezelen®" is derived from the Dutch verbs "snuffelen" which means to explore and "doezelen" which means to relax (Lifespire, 2015). The room was originally designed to help those with intellectual disabilities, but the two therapists realized that there was an overwhelmingly positive effect for both verbal and nonverbal individuals (Lifespire, 2015). In 1987, the United Kingdom began creating a Snoezelen® center dedicated to adults with intellectual disabilities (Snoezelen®, n.d). In later years the expansion of these rooms grew to over 40 countries (Snoezelen®, n.d). In 1992, the first Snoezelen® room opened in the United States at Lifespire in New York (Lifespire, 2015). In the United States there are over 1,200 Snoezelen® rooms today. Across the entire world, there are over 2,200 Snoezelen® rooms that are utilized for sensory stimulation to provide cognitive benefits to various populations (Snoezelen®, n.d).

Cognition plays a significant role in how an individual understands, processes, and organizes information with the brain. The process of cognition is described as how the brain contributes to what information is processed and how it is processed. A disruption in a person's cognitive abilities may lead to adverse behaviors due to the brain's inability to process both internal and external factors. When the brain and body are unaligned, the ability to function

“normal” becomes disrupted. One example may include having two or more sensory stimuli, such as auditory and tactile input, this can increase the amount of sensory feedback the body receives and sent to the brain, the sensory information can get misinterpreted and cause the individual to react with aggression, physical altercations to self/others, verbal outbursts, and worry.

This project explores how individuals with cognitive challenges may have a difficult time expressing feelings and emotions, which leads to aggression, physical altercations to self/others, wandering, moving objects around, and verbal outbursts. This project seeks to identify approaches useful for individuals with cognitive challenges to gain skills to learn how to control their emotional response to the effects of internal and external stimulation. A person with sensory processing/modulation/integration difficulties often becomes hyper or hypo responsive to the five different sensory sensations (Koziol et al., 2011).

The use of sensory rooms can assist adults in regulating emotions and providing a state of calmness by utilizing different senses such as touch, taste, smell, visual, auditory (Gillen, 2019). Tactile or touch response are identified as receptors located within the skin and are activated by skin contact which may include skin to skin contact, types of clothes, and brushing (Carson, 2019). Visual or sight response is defined by receptors that are located within the eye and the response the visual receptors have to light, colors, and shades (Carson, 2019). Auditory processing is defined by the auditory receptors that are located within the inner ear and how they are affected by various sound waves and vibrations (Carson, 2019). Gustatory or taste receptors are composed of taste buds that integrate chemical responses when eating, drinking, and chewing (Carson, 2019). Lastly the olfactory or smell receptors are composed of chemical receptors, which detect various environmental aromas through breathing in air and osmoreceptors which

detect osmotic pressure changes (Carson, 2019). The five senses are important to a person's ability to recognize and process what they are feeling through the different sensory receptors/input. The senses can affect a person's state of mind and emotional response to the world happening around them daily, thus affecting their ability to emotionally regulate and behave adversely because the senses that are being affected are being received, inputted and processed inappropriately (Carson, 2019).

AOTA reports that sensory rooms are underutilized yet benefit many individuals who interact with the tools provided in the sensory room (Kothari & Seruve, 2020). The problem that often arises is the lack of knowledge, education, training, and confidence within the healthcare team to best assist their residents with sensory interventions. This can be related to the other disciplines, such as physical therapy, registered nurses, certified nursing assistants, recreational therapy, restorative nursing assistants, physical therapy assistants, may not understand the depths of sensory integration. Occupational therapists (OT), certified occupational therapy assistants/occupational therapy assistants as well as speech language pathologists often approach clients with a more holistic lens and receive education on sensory integration and behaviors related to sensory processing.

Many healthcare workers lack the knowledge and confidence to understand the importance of finding holistic resources to assist residents with calming or alerting sensory tools to be able to regulate their emotions. There is limited research regarding the usage of sensory rooms within skilled nursing facilities (SNF), but evidence in other healthcare settings has shown the benefits of sensory rooms for adults with cognitive challenges. This project will focus on developing a sensory room protocol in a SNF of Southern Nevada to increase confidence of healthcare workers when working with individuals in the sensory room (Novak et al., 2012).

Research Question

The question this quality improvement project aims to answer is, “Will creating a sensory room protocol for staff at a skilled nursing facility increase their confidence in identifying residents needs and then utilizing the room to help promote emotional regulation in adults with cognitive challenges?”

Hypothesis

Will a sensory room protocol increase staff confidence and utilization of a sensory room to promote emotional regulation in adult residents with cognitive challenges.

Significance of the Project to Occupational Therapy

The significance of the project to occupational therapy is to demonstrate the unique lens occupational therapy can provide for sensory integration and sensory rooms with older adults. Sensory rooms have been on the rise not only within healthcare settings, and in everyday settings, such as airports, amusement parks, professional offices, and educational institutions (TFH, 2024). Sensory rooms for older adults are an emerging area of practice within the profession, and especially for individuals with cognitive challenges (Dorn et al., 2020). The development of a protocol would be beneficial to the occupational therapy profession as evidence is often insufficient in skilled nursing facilities. Therefore, creating a sensory room protocol specifically for SNF, using an OT lens, may be beneficial due to the holistic views OT have of an individual. Through education of staff on the benefits of sensory rooms, there exists a potential to increase knowledge and confidence of how the sensory tools work for individuals who have difficulties expressing and regulating their emotions.

Chapter Two: Statement of the Problem

The human autonomic and central nervous system work together and complete the sensory processing skills necessary to discriminate various sensory information from internal and external stimuli, however, when the body begins to misinterpret the information an individual's brain sends the body a wrong signal, which can lead to inappropriate behaviors (Camarate et al., 2020). Typically, individuals have normal reactions to sensory input such as tactile, an example would include being able to have little to no effect when a bristled brush is applied to the skin. However, when an individual has over-sensitive reactions to the bristled brush, it can cause anger, verbal, or physical outbursts (Camarate et al., 2020). These behaviors are not typically viewed as a normal reaction. Through scaffolding and attempting to desensitize the behavior, new reactions can be learned, such as not pulling away or having outbursts (Camarate et al., 2020). Sensory integration takes time to understand typical from atypical behaviors as every individual's system different regarding sensory integration. When there is a change in environment, the body can have a more difficult time processing the changes which makes the predictability of these challenges more difficult for the individual who has sensory processing deficits. Due to the sensory processing deficits, the reactions that can occur because of the specific sensory input being placed onto them may not necessarily fit their sensory need. This process can be due to dysregulation of the individual's system, thus leading to adverse behaviors (Smith & Douglas, 2022).

Evidence highlights four prominent problems about sensory interventions for individuals with cognitive challenges and behavior issues that may not address the underlying sensory dysregulation. Those four common problems include overuse of pharmacological interventions to deal with adult behavioral issues, missing education and training about sensory systems and

sensory integration for healthcare workers, the lack of research and support for the use of a sensory rooms with adults, particularly those in skilled nursing facility settings, and lastly the lack of OT involvement in the creation and implementation of sensory rooms.

Pharmacological interventions to address behaviors or misbehaviors within SNF are common and in the United States, 34% of facilities use pharmaceutical interventions to address adverse behaviors within residents (Agens, 2010). When medications are unprescribed, they are often considered chemical restraints. Within the healthcare system across the world, there has been an enormous push away from unprescribed medication usage (Agens, 2010; Novak et al., 2012). When pharmacological interventions are utilized there could be more negative effects as compared to the positive benefits for the residents, this type of intervention can lead to negative reactions such as falls, increased behaviors or decreased participation in daily roles and routines (Agens, 2010).

A second problem that has been identified is the lack of formal training for healthcare professionals on the benefits of sensory integration interventions, such as a sensory room, for adults. A formal training should include heads of departments ensuring that all staff are skilled with the tools to properly assist residents within the sensory room. The evidence suggests that training and education is as often as the facility and staff need, to promote increased knowledge, confidence, and usage as the first form of redirecting and intervention for residents having difficulties with emotional regulation (Chalmers et al., 2012; Champagne & Sayer, 2004: Dorn et al., 2020; Proterra et al., 2021).

The next distinguished problem that is outlined is a lack of evidence about sensory rooms for adults, especially within a SNF setting. Many sensory rooms that are being created and utilized are for the pediatric population and within the educational setting, as well as psychiatric

settings (Grace, 2020). As there has been a growing amount of sensory rooms being developed within the United States, however there is still more room for sensory rooms to be placed in settings that adult individuals interact with, as it has been shown in literature that sensory rooms assist with a variety of ages and individual need to regulate emotions whether a diagnosis is present or not (Grace, 2020; Snoezelen®, n.d; TFH, 2024).

Finally, occupational therapists practice with a holistic lens necessary for the proper creation of and implementation of a sensory room. Occupational therapists have a special position when presented with taking on sensory rooms and providing sensory interventions for sensory modulation and emotional regulation skills. Evidence indicates when an OT creates, educates, and sustains the sensory room, the success rate increases as well (Champagne & Gray, 2011). This is why there have been deficits in sensory rooms and lack of holistic approaches with individuals lacking control of their emotional range. “Occupational therapy practitioners work collaboratively with people in a manner that helps to foster hope, motivation, and empowerment, as well as system change” (Champagne & Gray, 2011).

The Significance of this Problem for OT

The purpose of this project is to evaluate the effects sensory integration and sensory rooms promote emotional regulation in adults with cognitive challenges. Grace (2020) expressed that sensory rooms have the ability to provide individuals with controlled sensory interactions that provide residents with purpose and control over their internal and external input/response. The reason why this project is important for OT and how it changes the problem that many OTs want to assist with is by focusing on the core values of the profession which is a holistic approach. By understanding the needs of the residents, any healthcare professional can begin to understand the outcome they are hoping to achieve, which is typically correlated with an

individual's ability to function properly in the behavioral aspect. By attending to the specific needs of the residents and incorporating sensory approaches into their daily routine can potentially reduce unacceptable behaviors but also adapt the individuals emotional state to regulate at a more appropriate level. When adapting a person's behavior to become more appropriate across various settings, the potential for them to engage in meaningful occupations and daily activities can also improve with those changes.

Chapter Three: Literature Review

Little evidence could be located regarding adult sensory rooms, particularly within a specialized setting such as skilled nursing facility where the benefits would seemingly be best evidenced. The current state of literature and knowledge around the use of adult sensory rooms are limited therefore this literature review will highlight the evidence for sensory rooms, the benefits of sensory rooms, and the need to educate and train healthcare workers of their benefits for individuals with cognitive challenges.

Adult Sensory Rooms in Skilled Nursing Facilities

Various online databases such as EBSCO, Google Scholar and UNLV Lied Library Database were utilized to find relevant evidence regarding sensory rooms in a skilled nursing facility. Finding little success for the specific terminology, sensory rooms in a skilled nursing facility, the search used literature with similar parameters such as adults, cognitive challenges, sensory modulation, and sensory rooms was searched. A total of fifty articles were located relating to sensory rooms and adult psychiatric and mental health units and their benefits.

Adult sensory rooms often include these items: Bubble tubes, fiber optic lamps, sensory brushes, aromatherapy, music, waterfalls, fidget toys, projects, musical instruments, weighted items, and sweet or minty snacks (Grace, 2020). All the items listed are a good starting point for an adult sensory room as they interact with the five senses. The most important idea to remember is that every resident is different, and it is important to consider the different sensory needs for the various residents within a skilled nursing facility. Some contraindications to consider for residents within a skilled nursing facility and interacting within the sensory room are if they have any sensitivity to light or seizure disorders, open wounds or rashes, hyper-sensitivity to touch, allergies to specific foods or smells always check documentation and discuss with nursing staff.

If residents have any adverse reactions or effects, discontinue immediately, document what occurred and discuss options with necessary parties to figure out the right course of action to always ensure resident safety. In Appendix H there is more information regarding contraindications and safety considerations when using sensory tools with the residents.

In the United States, 34% of facilities use pharmaceutical interventions to address adverse behaviors within residents (Agens, 2010). Instead of approaching behavior management holistically for individuals with cognitive challenges, it is more common to see healthcare professionals provide pharmacological interventions for these individuals. This type of intervention only places a temporary fix rather than working on a much deeper level of perhaps sensory processing issues. This then in the end affects the individual's ability to function to their full potential and could potentially be considered a chemical restraint (Novak et al., 2012). Evidence highlights that alternative interventions as a first course of action have shown decreased use of pharmaceuticals.

Sensory Room Benefits vs. Alternative Methods of Intervention

Pharmacological interventions involve some form of medication either scheduled or forced that alters inappropriate behavior (Anderson et al., 2017; Maseda et al., 2014). Behaviors that often lead to pharmacological interventions involve aggression, moving of physical objects, yelling, hitting self/others, wandering, distress, and hallucinations (Bjorkadahl et al., 2016). Often, the use of medication becomes the first line of defense for treating and adjusting adverse behaviors in residents, which can become problematic as the resident may have an increased risk of falls, injury, changes in weight, and decline engagement in meaningful occupations (Bangash et. al., 2017; Chen et al., 2013).

Sensory rooms have been shown to assist residents by reducing aggression, medication usage, distress, harming self/others, wandering, hallucinations, moving of physical objects, verbal outbursts, and confusion (Breslin et al., 2020; Bjorkadahl et al., 2016; Novak et al., 2012). Evidence has shown that residents can identify the type of sensory tools needed to adjust behaviors prior to having a need for pharmacological interventions (Dorn et al., 2020; Hudon et al., 2023; Novak et al., 2012; Oostermeijer et al., 2021). When the physical environment promotes a state of calmness and familiarity, residents have been shown to adjust their behaviors and go seek out the sensory room to assist their sensory need (Arya, 2023). Forsyth and Trevarrow (2018) highlight that residents can over time independently seek solace in the unit's sensory room, as they began to recognize their individual signs and symptoms of emotional dysregulation.

At times, there is a need for medication intervention; however, more education for the healthcare workers and staff as to alternative interventions may assist in challenging the pharmacological interventions as the first line of defense for behavior change (Dorn et al., 2020). Sensory rooms are specifically designed to provide sensory stimulation to the five senses to help promote emotional regulation (West et al., 2017).

Negative effects from the sensory room could include increased stimulation to sensory items, adverse reactions to items, allergic reactions, light sensitivity, annoyance with sensory items, frustration with not finding calming materials, tactile defensiveness, and lack of interest. If any of these behaviors occur, always discontinue the interventions, and speak with necessary healthcare professionals to ensure resident safety. It is important to watch for resident reactions such as becoming distant, changes in facial expressions, redness around tactile input

interventions, covering ears from auditory interventions and disgust in non-verbal/verbal expressions due to any specific smells (Grace, 2020).

Typical Skilled Nursing Residents

Within a skilled nursing facility, the most common diagnoses are strokes, traumatic brain injuries, psychosis, fractures, general weakness, dementia, confusion, frequent falls, and general adult failure to thrive (Grace, 2020). Many of the healthcare professionals within a SNF include therapists such as speech language pathologists, physical therapist, occupational therapists, registered nurses, certified nursing assistants, recreational therapists, social workers, case managers, registered nursing assistants, and licensed practice nurses. These healthcare professionals work together to ensure that the residents are provided with the utmost care, respect, and client-centered approach. Sensory rooms are a new type of intervention to assist residents with holistic approaches when experiencing emotional distress, healthcare professionals have a large contribution to assisting residents, which is why the need to educate and train healthcare workers of their benefits for individuals with cognitive challenges (Grace, 2020).

Education and Training for Staff

Educating and training staff that provide direct resident care has been identified as the most effective way to improve residents' behavioral discrepancies. There is significant evidence to support the notion that when staff have been provided current evidenced based education and training regarding assisting resident with emotional regulation skills that residents have increased their ability to self-identify and self-correct the adverse reactions they are having to external/internal influences (Barbic et al., 2019; Chalmers et al., 2012; Champagne & Sayer, 2004: Dorn et al., 2020; Proterra et al., 2021). The benefits of having staff educated and trained on alternative methods when assisting residents with emotional regulation, the costs of spending

decreases as there is a less of a need to provide traditional interventions such as medication interventions (Scalan & Novak, 2015). Champagne and Stromberg (2004) recommend there needing to be more training with those that provide direct resident care, as they are the ones that most likely could provide sensory interventions to the residents when needed most. Staff have identified that they feel unaware of how, when, and why a behavior is occurring and what can be done to address the behavior without going straight to medication. When identifying staff most likely to work directly in a unit of adults with cognitive challenges, the need is having those staff members trained and educated on why, how, what and when to provide the necessary sensory interventions to residents facing emotional distress. The purpose of the education and training for staff was to ensure they had the knowledge and confidence to assist their residents with alternative methods as an initial approach (Proterra et al., 2021). Barbic et al. (2019) and Proterra et al. (2021) understood the need for staff education and that the benefits of the sensory room training promote positive responses in residents, however identified that there were benefits to the staff too. Staff felt a level of calmness after learning the depth of sensory room benefits and what types of sensory tools can address different sensory and emotional needs (Barbic et al., 2019; Proterra et al., 2021).

Occupational Therapy Involvement

The most common type of intervention OTs use in a skilled nursing facility are occupation centered and provide meaningful, purposeful, and client-centered approaches (Jewell et al., 2019). The typical focus for residents within a SNF includes being able to get back to their prior level of function to reduce the need to be readmitted to the hospital (Jewell et al., 2019). The interventions that are often utilized are client-centered, which could include dressing, cooking, social participation, strengthening or house management (Jewell et al., 2019). Many

sensory rooms that are being created and utilized are for the pediatric population and within the educational setting, as well as psychiatric settings. As there is limited knowledge and research around adult sensory rooms within a SNF, I hope to create a tool that can be transferred across multiple adult settings to promote the use of sensory rooms as a tool to provide those living with cognitive challenges a healthy environment to seek specific sensory needs and provide the structure they need to succeed.

The evidence indicated the success of sensory rooms is significant when an OT provides input when formulating the room. Wiglesworth and Farnworth (2016) acknowledged that occupational therapists have increased knowledge and understanding when working to assist residents that have difficulties processing sensory input. Occupational therapists have an advantage when it comes to understanding and addressing sensory processing skills, and how to adapt the environment to fit an individual's specific sensory need to promote optimal engagement in daily life (Bodison & Parham, 2018; Wiglesworth & Farnworth, 2016). Subsequently there is a lack of practical knowledge surrounding the topic of sensory interventions and how to properly explore and use a sensory room.

Occupational therapists have a special position when presented with taking on sensory rooms and providing sensory interventions for sensory modulation and emotional regulation skills. OTs have a large scope of practice and can work on many diverse topics to promote the most holistic approach for their residents. When working with an interdisciplinary team, it is appropriate to shed light on different approaches, such as sensory integration and sensory rooms, as this form of intervention benefits the residents without limiting their capabilities by providing them negative alternatives such as medications or restraints.

Taking on a task such as this can be daunting for the OTs. However, regarding the profession it is extremely beneficial and enlightening. It gives the OT a unique opportunity to increase their education and interaction with the interdisciplinary team not only to increase resident outcomes but promote the OT profession. When OTs are working on finding solutions to problems such as medicating residents instead of trying other approaches, it can lead to some barriers but by persevering, the benefits outweigh the barriers. The increased engagement and understanding that OTs have surrounding sensory rooms allows for the staff to become more knowledgeable and confident with their ability to work on regulating problematic behaviors within residents that have cognitive challenges.

Summary

The evidence for sensory rooms, the benefits of sensory rooms, and the need to educate and train health professionals of their benefits for adults with cognitive challenges are important to consider as there has been evidence regarding successful outcomes when it comes to these findings. The benefits of sensory rooms on individuals have shown that there has been a consistency of decreased medication usage and increased sense of calmness within residents (Scalan & Novak, 2015). The evidence also demonstrates that education and training is a vital part of the success of sensory rooms as well as providing residents with emotional regulation skills through use of sensory tools during periods of adverse behaviors. Lastly, through evidence sensory rooms have had good success in other settings such as psychiatric/mental health units, however, when seeking evidence in skilled nursing facilities the literature is insufficient thus needing more future studies to identify and highlight the benefits of sensory rooms within skilled nursing facilities.

Chapter Four: Statement of the Purpose

The purpose of this doctoral capstone project was to increase the staffs' confidence and knowledge regarding the use of the sensory room and the tools provided to promote emotional regulation in adults with cognitive challenges. It was intended that the sensory room protocol would increase the staff's motivation to try more holistic approaches prior to providing medical interventions when addressing adverse behaviors in residents.

Objectives

The first objective of the project was to assess the need for a sensory room and staff's baseline knowledge and receptivity of a sensory room at a local SNF, Henderson Health and Rehabilitation.

The second objective was to create and build the sensory room protocol and train healthcare workers in the setting.

The third objective was to observe and work with residents within the sensory room to understand their reactions when provided different sensory tools thereby assisting staff in providing the correct opportunity for sensory tools to promote emotional regulation.

The fourth objective was to assess the staffs' confidence after the sensory room was created and implemented.

Hypothesis

By creating a sensory room protocol, there will be an increase in staff confidence regarding the utilization of the sensory room to promote emotional regulation in adults with cognitive challenges.

Chapter Five: Theoretical Framework

Person, Environment, Occupation (PEO) Model

The PEO model best suits this project because it allows everyone to have their specific needs met by changing their occupation or environment. As often seen with the PEO model, there is common knowledge of one specific area affecting the other (Wong, 2018). The person, environment, and occupation can change depending on the specific need but there is also the variable of constant (environment) and the other two changing (person, occupation). If the room stays the same, but the individuals utilizing the room change, so will the occupation. The occupation would be what the patient is working with, such as sensory items and the goal they are seeking to accomplish. In this case, the goal is to be able to regulate emotions, which is why the PEO model is the best choice for this specific project. Understanding that the person, occupation, and environment can and will change allows the health care professional to understand that one affects the other.

The project sought out to find ways to assist residents with cognitive challenges to better understand the way their environment has an influence on their specific occupational participation. When the individual understands that the outcome, they seek can be influenced based on the environment or occupation they are performing. The constancy of knowing yourself can provide ease of adaptation to the changes in environment and the occupation one is engaging in, but when the individual has cognitive challenges, can negatively impact the person and their ability to adapt. That is why this project will utilize the PEO model to assist individuals with ease in adapting to the changes in their daily lives. Evidence indicated that individuals with cognitive challenges have difficulty with over stimulation and extreme change, which is why having the PEO model as a guide and intertwining the idea of sensory rooms to decrease the resident's

amount of behaviors to promote the necessary changes throughout their daily routine in a productive manner. Knowing that the PEO looks at the person, environment and occupation, those looking to assist the residents with regulating their emotions, can understand that adaption and change is a necessary part of this project due to the fact that the way to achieve the sought after outcomes of decreased behaviors will need worked around the specifics such as change in environment or what occupation they are utilizing such as changing the environment from the residents room to the sensory room and also changing the occupation to best suit them, just like the variety of sensory tools (Arcand-Dusseault & Egan, 2015).

Vygotsky Learning Theory

To ensure that this program development project stayed on task when working to create, educate and train the staff at Henderson Health and Rehabilitation, the use of Vygotsky worked best in congruence with the authors structured timeline. The author utilized various educational methods to be able to create a program that would continue to be successful after ending the program development process (Shabani & Ewing, 2016). The use of scaffolding was utilized to provide surveys that gave insight into the staffs understanding of sensory rooms, which allowed for the protocol to be formulated, which lead into educating the staff on how to use the protocol, the author was able to observe the staff and residents within the sensory prior to gathering follow-up surveys to determine if the educational materials were sufficient enough for the staff to feel confident when working with residents in the sensory room (Shabani & Ewing, 2016). The author believes that the educational aspect of the project aligned well with Vygotsky's learning theory, as the theory was created to allow for whomever used the theory to build up to the end goal, where in this case it was to determine if the staff felt confident when working with

residents in the sensory room, after receiving each aspect of the program development phase (Shabani & Ewing, 2016).

Chapter Six: Methodology

Study Design

The project focused on program development using a quality improvement design. Observations as well as pre and post questionnaires were used with the healthcare workers of the facility to understand if the sensory room protocol increased the staffs' knowledge and confidence when working in the sensory room to assist residents with cognitive challenges tools to improve their emotional regulation skills.

Agency Description

The project was completed at Henderson Health and Rehabilitation in Henderson, Nevada. Henderson Health and Rehabilitation is a skilled nursing facility, which provides various types of rehabilitation services such as occupational therapy, physical therapy, and speech language pathology. There is also around-the-clock care from certified nursing assistants, registered nurses, nurse practitioners, and physicians. There are two buildings on the grounds, A and B building, with a total of 266 beds. The A building houses more of their long-term care residents with less around the clock care, whereas B building has two floors also known as units and the first-floor unit typically has new admissions from various settings and the second-floor unit is where the capstone experience and project will take place. This unit, commonly referred to as B2, requires the most assistance as it is the neurological floor, which is locked for resident safety. The neurological floor is home to the facility's sensory room, and where the project took place.

Target Population and Sampling

The target population for this capstone project was the staff at Henderson Health and Rehabilitation. To recruit participants, convenient, and snowball sampling was used. Total of participants N=50 engaged the project.

Phase I Procedure (Objective 1 and 2)

After completing a strengths, aspirations, opportunities, and results analysis (SOAR), there were adequate findings that the facility, Henderson Health and Rehabilitation, would benefit from a protocol for an adult sensory room as well as staff training on its benefits and uses (Stavros & Cole, 2013; Zarestky & Cole, 2017). The sensory room protocol (Appendix D) provided insight into why each sensory tool was chosen for this specific SNF. With collaboration from the expert mentor, the sensory protocol was to become a guide for the staff to grasp and gain confidence on the purpose of each sensory tool provided within the sensory room and how each of those tools can be beneficial for resident use.

Strengths for Henderson Health and Rehabilitation include having the space to house the sensory room and providing either individual or group interventions within the room. Opportunities for Henderson Health and Rehabilitation include increasing the knowledge the staff has of the sensory room to promote more usage of the sensory room for their patients. The other opportunity that was found included increasing the amount of sensory items within the sensory room. There is a ton of potential to increase the amount of sensory items to house more items that provide sensory input for the five senses, as every individual using the sensory room may need different sensory tools that provide input to their various sensory needs. Aspirations for Henderson Health and Rehab include ensuring that staff and patients are always feeling good in all aspects of their time at Henderson Health and Rehabilitation. Providing comprehensive

care to the residents within Henderson Health and Rehabilitation while also promoting staff autonomy. Results include providing Henderson Health and Rehab a sensory room protocol specifically for the population within the facility to promote advanced is home for many. By creating, training, and educating the healthcare staff on the sensory room protocol, there will be increased results of use within the sensory room as the staff will be more equipped with knowledge and training on how to utilize the sensory room properly and effectively for their patients that would benefit most from the sensory room and the sensory items within.

The sensory room protocol was formulated by understanding how best the staff received and interpreted information. Through verbal communication and baseline knowledge survey, the questionnaire identified that individuals learned best through verbal, written and visual communication. The protocol creation kept in thought that it was important to be easy to read yet have enough details to provide the staff with information on how to work with residents within the sensory room. The protocol form was in conjunction with an educational in-service to solidify the importance and benefits of sensory rooms. Often staff within a SNF are busy and do not have extra time out of their schedule to learn an entire new intervention, which is why the in-service was provide during scheduled staff meetings to make sure that all staff were provided adequate education, and one-on-one trainings were provided to go more in-depth and answer any questions a staff member may have. The staff at Henderson Health and Rehabilitation are required to attend department specific and the once a month all staff meetings, which was utilized for the project. The final sensory room protocol provided history and the purpose of sensory rooms, with a guide of how and when to use specific sensory tools. This protocol has been developed to become a guide for the staff within the skilled nursing facility to reference back to as they begin to get comfortable and work with residents within the room.

Phase II Protocol and Education (Objective 3&4)

Throughout the experience, after week 8 observations and field notes were conducted/complied to understand the residents and the healthcare workers perspectives when interacting with the sensory room. Through the remaining weeks, observations were occurring and there was a consistent schedule of residents that would come to interact with the sensory room. The residents would be provided with two options, either the same sensory bin or two different sensory bins, such as tactile or auditory bins. The observations noted that the residents did have changes in emotions overall, at times there were no changes. By week 10 the sensory room follow-up survey was provided to staff directly interacting with residents that would be benefiting from the sensory room. The survey indicated that the staff had a better understanding of tools that will benefit the residents with calming and alerting materials that promote various sensory input to the five different senses.

Data Collection

Pre-Survey

Following the needs assessment, the baseline survey was created during the first week of the project through. Pre survey of staff through QR code posted for all shifts and departments within the facility. A total of thirty-four participants (n=34) completed the 8-question survey (See Appendix B). The information was used created sensory room protocol and educational in-service materials. The sensory room was created, and four (n=4) residents were observed in the room and the protocol developed (See Appendix D).

Inservice

The education and training began around week 8 and that was held during nursing shift change at 2 p.m. on Tuesday and Thursday. There were various dates for mini-in-services and one-on-ones beginning week 12. The departments for therapy and activities were held during their mandatory lunch break meetings around noon on Tuesday/Thursdays. The in-services lasted less than 15 minutes to allow for other members of the staff to provide meeting details and answer any questions regarding the sensory room. The in-service was provided verbally, with educational materials in written format to provide various learning types to ensure all staff understood the educational session (See Appendix D, E, F, G & H). When providing one-on-one sessions many times residents would be available to provide first-hand sensory interventions to assist with emotional regulation.

Observations

Through use of field-notes, there was direct observations made to understanding how residents were able to interact and feel when provided sensory tools to assist with regulating the emotions they were expressing prior to sensory tool interactions and after sensory tool interactions. The observations allowed for an increased understanding of how the residents felt when provided a variety of sensory tools. By observing verbal/non-verbal responses, changes in affect often appeared positive.

Post-Survey

A post survey (n=16) was collected to determine confidence levels of staff to use the sensory room (See Appendix C). The follow-up survey after the training was posted around the facility and provided after the in-service via Google forms and QR code. This survey contained 9

questions and was used to determine if the protocol needed any adjustments to improve the success rate of staff knowledge and confidence when working with residents in the sensory room.

Data Management and Analysis

The data that was collected via Google forms and kept confidential and secured with Google two-step authentication for access to respondent results. Descriptive statistics were used, and the data transferred to a Likert scale rating, and later to Google Sheets to determine meaningful change in staff learning and confidence with sensory rooms and the protocol. Observations were recorded with field notes to ensure that there was real-time interactions and data regarding if the sensory room and tools were having either a positive, negative or no impact on the residents and to determine if the protocol or educational session needed editing. The post survey was provided to staff via Google Forms and QR codes were put up around the facility to increase response rates. The survey included questions regarding staff confidence in identifying calming and altering sensory materials and the benefits sensory rooms have on adults with cognitive challenges.

Chapter Seven: Ethical and Legal Considerations

All participation was voluntary for education, surveys, and sensory room interactions. All data collected was anonymous with no identifiable information. All resident and staff participation interactions that contributed to the expansion of this capstone project adhered to the facilities' rules and regulations, admission intake consent forms, policies and procedures, HIPAA, and the AOTA code of ethics to maintain ethical and legal considerations.

Chapter Eight: Results

The objectives of the project were to identify the need for the sensory room, determine what staff's knowledge was regarding the sensory room at Henderson Health and Rehabilitation. After gathering baseline knowledge, the formulation of the sensory room protocol and materials were gathered and implemented into the sensory room. Following the creation of the sensory room, increased interactions and observations of staff and resident usage happened within the sensory room, to gain insight into how effective and confident the staff felt after implementation a confidence level survey was gathered. These objectives drove the purpose of the project and provided insight into the effectiveness of the sensory room protocol for staff's confidence and resident interactions to promote emotional regulation.

Sample Characteristics

The participants (N=50) included various departments that provided the highest amount of time providing direct resident care. The departments included, restorative therapy, recreational therapy, activities department, and nursing as the highest majority of sample characteristics, as they have the most time spent with residents that have potential benefits from sensory room interactions.

Table 1

Sample Characteristics (N=50)

Department	N=50	Pre-survey N=34	% of sample	Post-survey N=16	% of sample
Therapy/Restorative Therapy		20	58.8	13	81.3
Activities/Recreational Therapy		1	2.9	1	6.3
Nursing		7	20.6	1	6.3
Certified Nursing Assistant		2	5.9	-	-
Administration		2	5.9	-	-
Social Services		1	2.9	1	6.3

Note. Departments represented in the pre and post survey responses. Percentages reflect direct patient care to indicate protocol usage throughout various departments.

Pre-Survey

The 8-question survey included questions such as, “do you know what a sensory room is”, 16 out of 34 respondents stated that they knew a “moderate amount regarding sensory rooms”. Due to this survey, there was a clear understanding that the rest of the respondents knew “little to none” about sensory rooms. Other important questions that guided the creation of the sensory room protocol were questions related to, “how best do you learn” and “would a sensory room protocol increase sensory room interactions”. Responses of yes, indicated a protocol would be beneficial and the success of educating on the protocol would be by educating on a visual, written, and verbal format. Through this information, the creation of the protocol was formulated. Lastly, much of the staff had basic knowledge regarding the benefits of sensory

rooms, such as understanding that sensory rooms are beneficial to calming and descaling approaches.

Table 2

Pre-Survey Questions and Responses

Department N=34	Response	How would you rate your CURRENT understanding of sensory rooms (rooms filled with items such as fidget toys, bubble tubes, essential oil diffusers, etc.)
Therapy/Restorative Therapy	- I know a lot about sensory rooms	2
	- I know a moderate amount about sensory rooms	12
	- I know a little about sensory rooms	5
	- I know nothing about sensory rooms	1
Activities/Recreational Therapy	- I know a moderate amount about sensory rooms	1

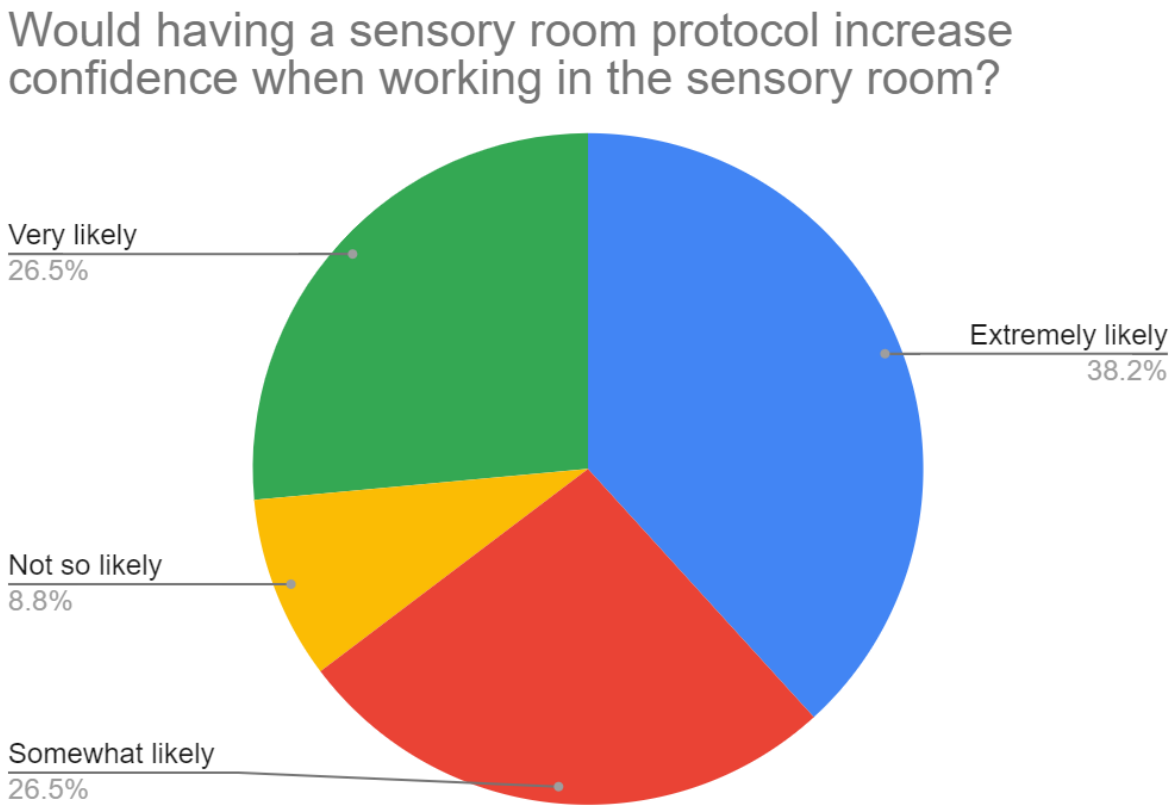
Nursing	-	I know a lot about sensory rooms	2
	-	I know a moderate amount about sensory rooms	1
	-	I know a little about sensory rooms	3
	-	I have heard about sensory rooms	1
Certified Nursing Assistant	-	I know a little about sensory rooms	1
	-	I have heard about sensory rooms	1
Administration	-	I know a moderate amount about sensory rooms	1
	-	I know a little about sensory rooms	1

Social Services	-	I know a moderate amount about sensory rooms	1
	-	I know nothing about sensory rooms	1

Note. Pre-survey current staff knowledge regarding sensory rooms

Figure 1.1

Staff Response to Potential Sensory Room Protocol



Note. Staff reported that a sensory room protocol would increase their confidence in regard to working in the sensory room.

Observations

Resident A

During the 14 weeks, resident A had a reputation in the facility as self-injurious, angry and reckless, a great deal of behavioral incidents documented, such as aggression to self and others, wandering, moving objects around, verbal outburst and inappropriate. The resident would often roam the halls, move objects, inflict self-harm on self and staff, and have negative verbal outbursts. When working with the resident, it was found through trial and error of various sensory senses to determine that the resident had an increased interest and response to music. Resident would begin to identify the author as the person to be able to provide music to them when they were beginning to have deficits in regulating emotions. The author was able to identify through non-verbal communication that the resident enjoyed music, they would dance, clap, laugh and smile.

Resident B

For this residents, they were able to identify that they found calmness through taste. They would ask for another one when they felt like an emotional shift was occurring. They had multiple redirecting behaviors to allow for appropriate behaviors but were often motivated by the sense of taste, with a more intense flavor such as mint. This resident understood they would be rewarded with a positive sensory tool when the appropriate behavior was indicated. The residents often used large physical motions to indicate their frustration. When interacting with the sensory room, they were able to remain seated, attentive to task and calm just by a change of environment.

Resident C

Often confused and unable to remain on task due to decreased cognition, however, when provided sensory dog resident was able to identify sensory tool as a dog and asked to take care of the dog and wanted to name the dog as it was now theirs. The resident went from being unaware of their surroundings to being grounded in the present and able to identify familiar objects while promoting emotional regulation in various sensory systems. This resident was able to stay on task and increase conversational skills more effectively after interacting with the sensory room.

Resident D

Often found wandering into other residents' rooms, which agitated the other residents. This resident would be unaware of personal boundaries and was provided redirecting behaviors when in the sensory room. The sensory room provided the resident with tools that would provide attentive behaviors to redirect into more appropriate and positive behaviors when interacting with other residents and staff. This resident often wandered into the sensory room and would interact with visual items, as well as tactile sensory tools. When interacting with these sensory tools, they were able to attend to the task for an extended period of time, which reduced wandering.

Table 3

Observations

Resident	N=4	Pre-sensory behavior	Post-sensory behavior	Sensory Tool
Resident A		Physical aggression, Verbal outbursts, Wandering.	Calm, Attentive to task, Respecting boundaries, Happy	Music/Radio, Aromatherapy
Resident B		Verbal aggression, Psychical aggression,	Attentive to task, Calm, Polite conversation	Listerine Tab, Music, and Fiber optic light
Resident C		Confusion, Irritated, Wandering	Attentive, Introspective, Engaging in conversation, Joyful	Fidget dog, Wall squares, Music
Resident D		Wandering, Decreased personal boundaries, Verbal aggression	Calm, Respectful of boundaries, Attentive to task, Increased positive conversational skills	Fidget dog, fidget toys, Music, Spinning wall art, Bubble tube

Note. Resident observations within the sensory room, pre and post behaviors.

Protocol for Appropriate Use

When determining when and how to use the sensory room protocol, it is always important to understand why the resident is a good fit for sensory tools/interventions, what is the specific outcome they are needing. Please refer to Appendix D, the sensory room educational resource. Every resident will require different sensory tools, as each resident has preferred sensory input. When working with residents, it will require patience and trail-and error as it takes time to understand the appropriate items, if appropriate utilize a sensory diet form to help identify resident likes and dislikes. When working with residents, the protocol within the sensory room is a great tool to identify what tools help with which sensory system and what to look for when wanting to address specific behaviors and outcomes. It is never appropriate to force residents to continue engage with sensory tools that are never preferred, always watch for non-verbal such as faces of disgust, pulling away, agitation and recoil.

Table 4

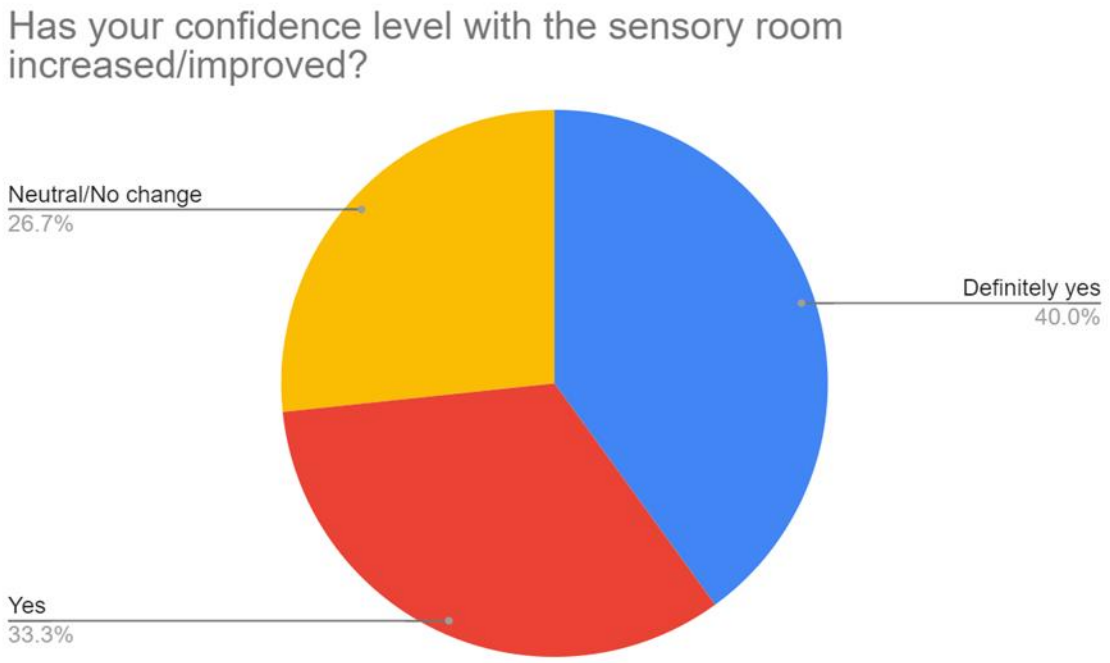
Post-Survey Question and Response

Department N=16	Response	How would you rate your CURRENT understanding of sensory rooms (rooms filled with items such as fidget toys, bubble tubes, essential oil diffusers, etc.)
Therapy/Restorative Therapy	- I know a lot about sensory rooms	5
	- I know a moderate amount about sensory rooms	5
	- I know a little about sensory rooms	2
Activities/Recreational Therapy	- I know a moderate amount about sensory rooms	1
Nursing	- I know a moderate amount about sensory rooms	1
Certified Nursing Assistant	- I know a moderate amount about sensory rooms	2

Note. Post-survey current staff knowledge regarding sensory rooms

Figure 1.2

Staff Confidence Post Sensory Room Protocol Education/Training



Note. Staff showed increased confidence with sensory room tools.

The post survey included questions regarding the staff confidence when providing sensory tools to adults with cognitive challenges and which sensory tools are most beneficial for calming and alerting behaviors, while also providing skills to regulate emotions. As shown in figures above, there has been positive changes in staff confidence for those that "knew little about sensory rooms" (please refer to Table 1.1, Pre-survey).

Summary

There was a positive outcome for both staff and residents who engaged in the sensory room. The sensory room at Henderson Health and Rehabilitation was deemed useful and appropriate. Staff felt more comfortable and increased confidence with sensory room usage and identifying appropriate residents.

Chapter Nine: Discussion

The purpose of this project was to showcase the importance of having sensory rooms within a skilled nursing facility for adults with cognitive challenges. To promote adequate knowledge, confidence, and education on sensory rooms, the adult learning theory of Vygotsky was utilized (Shabani & Ewing, 2016). This type of learning theory allowed for the staff to build upon their baseline knowledge and gather more skills and knowledge to promote increased confidence when working with residents in the sensory room (Shabani & Ewing, 2016). The Vygotsky theory uses scaffolding to promote sufficient and long-lasting knowledge when learning new concepts, such as sensory rooms and how to provide sensory interventions to adults with cognitive challenges (Shabani & Ewing, 2016).

The sample characteristics for the pre/post sensory room protocol implementation survey can be found in Table 1. The sample characteristics identified the specific departments that participated, those departments included therapy, nursing, certified nursing assistants, activities/recreational therapy, social work, administration, and restorative therapy. The drop in participation following the implementation of the sensory room protocol can be attributed to attrition.

Sensory Room Protocol in SNF

Following the protocol development and in-service staff at Henderson Health and Rehabilitation felt more comfortable using the sensory room to redirect and assist residents that often expressed aggressive and verbal outburst by providing sensory tools to promote positive emotional outcomes. Residents with cognitive challenges benefitted the most, as the room provided sensory tools which had significant impacts on adjusting negative behaviors. There

remains a need for more research to be completed on adult sensory rooms within skilled nursing facilities.

Although no significant findings related to the sensory room protocol and the increase in staff confidence, there was a significant understanding amongst the staff as to which sensory tools could be used to produce calming or alerting outcomes. Observations of the residents and their verbal or nonverbal communication provided feedback on what sensory tools they preferred. Four residents participated and their emotional responses were noted when interacting with the various sensory tools within the sensory room. Those responses went from agitation to calm demeanor, sadness to a happy face, decreased aimlessness to increased attention. Additionally, the sensory room decreased agitation, decreased wandering and decreased confusion at varying levels for each of the residents. While each resident preferred different sensory inputs, all would smile, clap, laugh, and want to come back to engage with the tools again.

When adverse, aggressive, and agitated behaviors occur, most caregivers do not recognize the importance of attempting to assist with regulating the residents' behaviors in a more holistic approach, such as through sensory integration found in a sensory room. By educating and providing the staff with various sensory tools and options to assist residents to begin to participate in sensory modulation may allow individuals the opportunity to process various sensory inputs in the environment.

An occupational therapist will utilize a holistic lens to create and implement the sensory room, where residents can begin to maintain and recognize more appropriate behaviors. The concept of this idea is to promote a higher level of performance and adaptation for the residents when in various environments, such as the concept of PEO. However, by promoting the resident

to adapt to the environment and the specifics of their preferred occupations, there may be a noticeable improvement to the resident and their overall ability to respond to sensory modulation by understanding how and when to adapt to their specific environments. Skills learned through use of sensory rooms can benefit the residents and the ability to process how they feel when facing new and potentially unpredictable sensory inputs (Wilbarger & Stackhouse, 1998).

Challenges

The implications that could occur for future research, practice and education include having more sensory rooms in skilled nursing facilities, having a larger budget to increase the variety of accessible materials rather than keeping it locked up and continue to grow the usage of sensory room protocols for various other staff members, so the usage of sensory rooms flourish even when an OT is no longer involved.

The project had difficulties with beginning the project due to decreased monetary spending. The buy-in from staff was also another challenge faced, but there are hopes for continued use and insight into benefits after implementation occurred.

Conclusion to Discussion

The entire project had various deficits and successes. The project was able to identify the need for a sensory room protocol. The project was also able to address the gap between literature and practice. Identifying the specific need for this local SNF, understanding the importance of the project and how to provide findings that aligned with the OT lens was important when ensuring long-term success. Using the PEO model and Vygotsky Learning Theory throughout the entire experience and project assisted the author with understanding how to educate and train staff successfully, while also providing a holistic client-centered approach when interacting with residents in the various environments they interact with and changing the occupation they are

seeking to achieve. As this project was specific to this type of setting, SNF, it is evident that there is a need for more research studies to be done on adult sensory rooms within a skilled nursing facility.

Chapter Ten: Limitations

The limitations that were a part of the project include small financial budget, opportunity to educate all staff and provide the extensive research on the benefits of sensory rooms as well as their needed to be more staff follow-up education, as this would ensure that the staff was in fact implementing and continuing to learn how beneficial the sensory room can be for residents.

Chapter Eleven: Conclusion

The purpose of the sensory room at Henderson health and rehabilitation was to provide staff with increased awareness, education, knowledge, and confidence when working with residents that have cognitive challenges, as the benefits of sensory rooms are continuing to be researched and used the best practice for resident outcomes. The research regarding skilled nursing facilities continues to be non-existent, but the author has hope that as sensory rooms continue to grow throughout the United States and in healthcare settings that there will be more evidence on how effective and beneficial sensory rooms are for residents residing in skilled nursing facilities. The 14-week experience was a unique opportunity to provide research and holistic approaches to disciplines that have had minimal experiences with sensory integration and the benefits of sensory tools on individuals. Throughout the 14 weeks, the author was able to identify the need and learn about how this capstone project can be a small part of filling the gap when it comes to sensory rooms within a skilled nursing facility and how it benefits individuals with cognitive challenges. Lastly, the author had the opportunity to promote the field of occupational therapy through an emerging area of practice by creating, implementing, educating, and training various other healthcare professionals on just how unique and diverse the scope of OT and how it can provide benefits to individuals not only through physical assistance but through emotional and cognitive assistance. As the significance of how effective the sensory room protocol was during this project, may not have been substantial, the author recognizes the impact this capstone has made on the residents and the staff that work with the residents daily and look forward to seeing the continued growth of sensory room within a skilled nursing facility in future practice. Through the needs assessment indicated that at this specific SNF, Henderson Health and Rehabilitation, that there was an increased need for staff education, training, and a

physical sensory room protocol to assist the staff with gaining the knowledge and confidence to be able to work with residents that have cognitive challenges and are unable to redirect and control their emotions independently. After the fourteen-week experience, the staff at Henderson Health and Rehabilitation expressed their sincere gratitude regarding creating the sensory room and providing sensory room protocol materials and trainings to allow them to refer back to when they need a quick refresher during sensory room interactions.

Appendix A

Operant Definitions

Sensory Room

Room specific to assisting individuals with cognitive challenges to have a place to regulate emotions by using sensory tools.

Sensory Tools

Objects within the sensory room for individuals to be able to use that incorporate the five senses (Sound, Touch, Smell, Visual, and Taste).

Emotional Regulation

The ability to affect emotions and how to experience and express them.

Cognitively Challenged

Individuals with cognitive conditions that may affect emotional regulation, conditions including (Brain Injury, Dementia, Alzheimer's, Congenital disorders that affect the brain, and Mental Health Disorders), which are unable to recognize what emotion they are feeling.

Skilled Nursing Facility

A facility in which residents can live long-term while having access to healthcare professionals 24/7.

Sensory Modulation

The central nervous system's ability to recognize and respond to sensory stimuli.

Appendix B

Baseline Knowledge Survey for the Sensory Room

Please check the response that best describes you and your understanding.

* Indicates required question

1. What department do you work in? *

   Mark only one oval.

   - ◯ Therapy/Restorative Therapy
   - ◯ Nursing
   - ◯ Certified Nursing Assistant
   - ◯ Activities/Recreational Therapy
   - ◯ Other: _____

2. How would you rate your CURRENT understanding of sensory rooms (rooms filled with items such as fidget toys, bubble tubes, essential oil diffusers, etc.) *

   Mark only one oval.

   - ◯ I know nothing about sensory rooms
   - ◯ I have heard about sensory rooms
   - ◯ I know a little about sensory rooms
   - ◯ I know a moderate amount about sensory rooms
   - ◯ I know a lot about sensory rooms

3. Do you know the sensory room exists (End of 2100 hall)? *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

4. How often do you CURRENTLY use the sensory room? *

Mark only one oval.

- 0-5 times a month
- 6-10 times a month
- 11-15 times a month
- 16+ times a month

5. When you CURRENTLY use the sensory room, how much time do you spend in there? *

Mark only one oval.

- 0-10 minutes
- 11-20 minutes
- 21-30 minutes
- 30+ minutes

6. What do you think a sensory room might help achieve? (Select all that apply) *

Check all that apply.

- [ ] Calming/Deescalating effects
- [ ] Alerting effects
- [ ] Busy/Distracting effects
- [ ] Social Engagement/Positive effects

7. How do you learn most effectively? *

Mark only one oval.

- ◯ I learn best by seeing/reading information (A)
- ◯ I learn best by hearing information (B)
- ◯ I learn best by doing/trying (C)
- ◯ I learn best by A &B
- ◯ I learn best by A & C
- ◯ I learn best by B & C
- ◯ I learn best by A, B & C.

8. Would having a sensory room protocol (specifics of when, how, and what to do when using the sensory room) make you more likely to use the sensory room? *

Check all that apply.

- ☐ Extremely likely
- ☐ Very likely
- ☐ Somewhat likely
- ☐ Not so likely
- ☐ Not at all likely (PLEASE EXPLAIN BELOW in OTHER option)
- ☐ Other: _____

Appendix C

Follow Up Survey for Sensory Room Protocol

Please check the response that best describes you and your understanding.

* Indicates required question

1. What department do you work in? *

   Mark only one oval.

   - ◯ Therapy/Restorative Therapy
   - ◯ Nursing
   - ◯ Certified Nursing Assistant
   - ◯ Activities/Recreational Therapy
   - ◯ Other: _____

2. How would you rate your CURRENT understanding of sensory rooms (rooms filled with items such as fidget toys, bubble tubes, essential oil diffusers, etc.) *

   Mark only one oval.

   - ◯ I know nothing about sensory rooms
   - ◯ I have heard about sensory rooms
   - ◯ I know a little about sensory rooms
   - ◯ I know a moderate amount about sensory rooms
   - ◯ I know a lot about sensory rooms

3. Are you aware of the sensory room protocol that is posted in the sensory room? *

   Mark only one oval.

   - ◯ Yes
   - ◯ No

4. Has your engagement in the sensory room increased since the protocol? *

Mark only one oval.

- ◯ Yes
- ◯ No

5. Has the protocol helped you to be able to identify "calming" and "alerting" tools? *

Mark only one oval.

- ◯ Yes
- ◯ No

6. Has the protocol increased your ability to assist residents with controlling emotions? *

Mark only one oval.

- ◯ Yes
- ◯ No

7. Has your confidence level with the sensory room increased/improved? *

Mark only one oval.

- ◯ Definitely yes
- ◯ Yes
- ◯ Neutral/No change
- ◯ No
- ◯ Definitely not

8. What do you think a sensory room might help achieve? (Select all that apply) *

Check all that apply.

- [ ] Calming/Deescalating effects
- [ ] Alerting effects
- [ ] Busy/Distracting effects
- [ ] Social Engagement/Positive effects

9. How likely are you to recommend the Sensory Room to a colleague? *

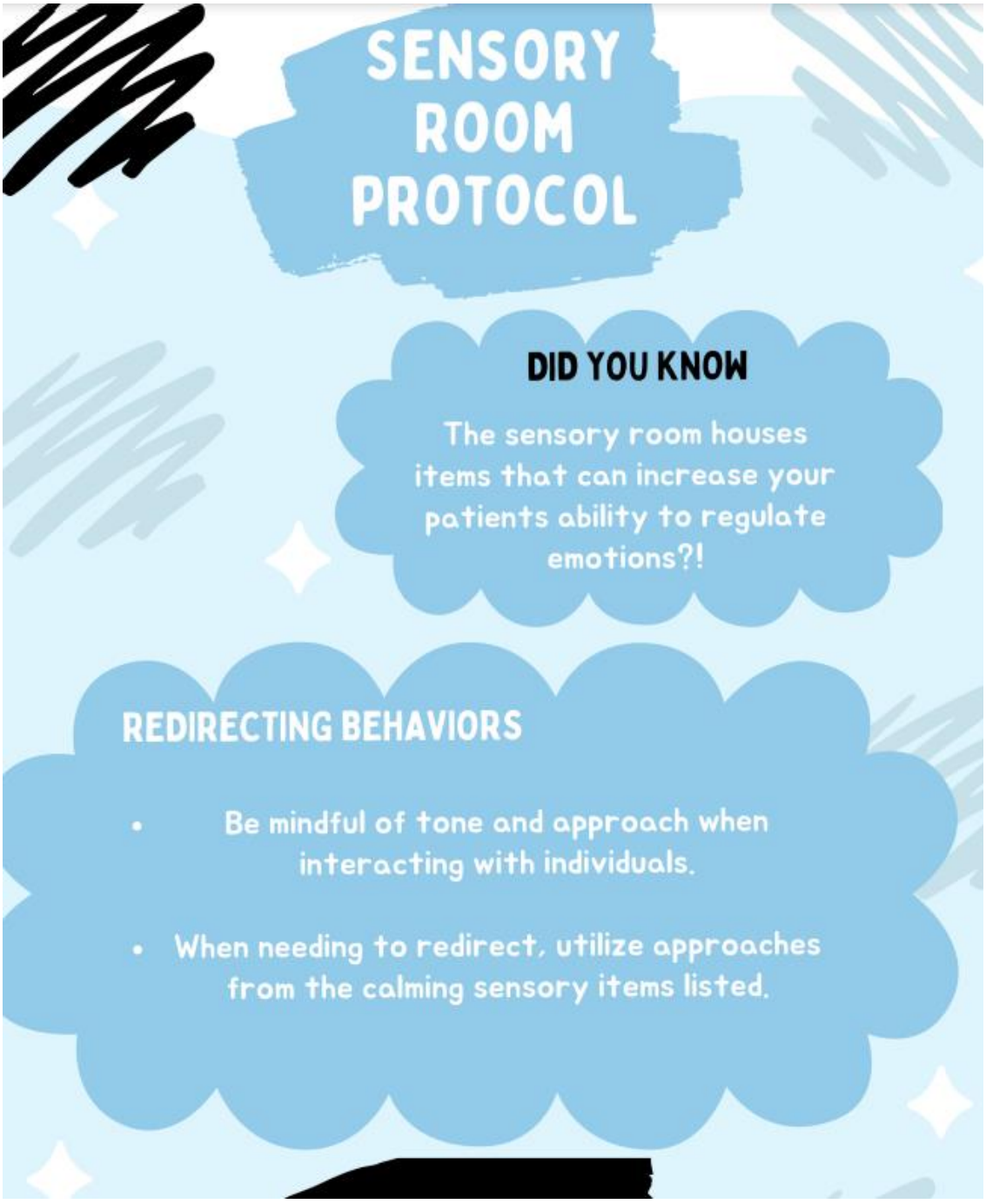
Mark only one oval.

- ◯ Extremely likely
- ◯ Very likely
- ◯ Somewhat likely
- ◯ A little likely
- ◯ Not at all likely

Appendix D


SENSORY ROOM PROTOCOL
CALMING
Sensory Brushing
Music
Fidget Toys
Bubble Tube
Fidget Dog
Fiber Optic Lamp
Aromatherapy
Wall Squares
Watercolor Tiles
Lavender Scented Lotion
Lollipops
Shaving Cream
Sand Art Picture Frame
ALERTING
Citrus Lotion
Aromatherapy
Listerine Tabs
Textured Plastic Tiles
Spinning Wall Art
Space Projector
Music
Sun Light
3D Pin Impression
Egg Shaker
Guiro Fish Instrument
Wood Drum Set
Resources
Tina Champagne, OT - Sensory Modulation Program
• tina@ot-innovations.com
Tyrah Sprianu, PT- DOR Henderson Health and Rehabilitation
• TSprianu@ensignservices.net

Appendix E


SENSORY ROOM PROTOCOL
DID YOU KNOW
The sensory room houses items that can increase your patients ability to regulate emotions?!
REDIRECTING BEHAVIORS
• Be mindful of tone and approach when interacting with individuals.
• When needing to redirect, utilize approaches from the calming sensory items listed.


QUESTIONS TO CONSIDER
QUESTION ONE
What do you already know that the patient you are working with likes/dislikes?
EX: My patient likes to listen to music but dislikes strong scents
QUESTION TWO
What are the patient's intended outcomes and what are they trying to achieve?
QUESTION THREE
Is your patient on any special diets? It is important to know when it comes to the sense of taste.
ALWAYS monitor patients when food is involved.
QUESTION FOUR
Can your patient stand? If not, what modifications can you make to achieve accessible interactions within the sensory room.

Appendix F


Sensory Room Checklist
** Be the reason to help MAINTAIN the Sensory Room's SUCCESS**
Wash/Sanitize hands prior to using Sensory Items
** Sanitize residents hands as often as needed **
Wipe down all used Sensory Items
Place all Sensory Items back into properly labeled boxes
Lock up ALL Sensory Items after use
Make sure to put Sensory Room Key back for others to use
** Make sure to return all Sensory Items, if removed from the room **
** Always observe resident with food items **
THANK YOU!

Appendix G

Formal Descriptive Protocol

Features	Description
Rationale	The gap has been identified using a SOAR analysis to determine what the specific needs were for Henderson Health and Rehabilitation and why there is a need for this type of capstone project. The needs identified have shown that there has been a lack of education to staff surrounding the sensory room and that there is no consistent usage of approaches to address adverse behaviors, such as the utilization of sensory rooms and sensory techniques. Research suggests that when a sensory room is created, implemented and education provided by an Occupational Therapist, the outcomes of successful usage increases. Research also suggests that when methods such as sensory interventions are implemented residents are at an increased likeness to recognize and appropriately express their emotions.
Protocol Objectives	The protocol is to guide staff at Henderson Health and Rehabilitation to be able to identify and provide sensory tools to residents by engaging and interacting with the five senses. The question seeking to be answered for this capstone project was

	"Will creating a sensory room protocol for staff at a skilled nursing facility (SNF) increase their confidence to utilize the room to help promote emotional regulation in adults with cognitive challenges?". The author researched and created a sensory cabinet that houses a range of sensory tools to assist patients with emotional regulation when they are feeling a spectrum of emotions and may not know exactly how to identify them. By using the sensory room protocol, the author hopes to determine if there is a need for more improvements with either the materials in the sensory room, education, or training. By understanding and working to continuously improve the sensory room, the author believes that the continued changes can help this room be a successful post capstone experience. Lastly, the project seeks to help advance the OT profession by creating a successful sensory room for a skilled nursing facility.
Design, and Selection Criteria	The design of this capstone project is to create a protocol for all staff at Henderson Health and Rehabilitation to ensure that every person can understand and utilize the sensory room and sensory items. This is a quality improvement study, meaning the hopes are to take the basics and improve the outcomes. By using what resources were already in place and asking staff how they feel

	about the sensory room and what they hope to get out of it. The baseline knowledge survey was to see what the staff needed to create and promote the sensory room and how a protocol should be formatted to ensure future success. A follow up survey was provided to determine if the quality of the education and guide provided to them was efficient enough for them to feel prepared when working with residents within the sensory room. The staff was determined by the stakeholders of the facility in conjunction with the capstone student. The staff at Henderson Health and Rehabilitation is the target population as they will be the ones directly working with residents within the sensory room. There were observations of staff interaction within the sensory room to help the author understand if the protocol, sensory tools and education helped with resident outcomes, such as preventing adverse behaviors, redirecting and calming residents having outbursts. The other purpose of the sensory room is to help alert patients when they are lacking energy. The sensory room has various uses and again the hopes of this quality improvement study is to determine if there is enough within, and skill provided to be able to help residents achieve emotional regulation and reduce any risks of behaviors or pharmaceutical interventions.

Data Collection	The capstone experience utilized convenience and word of mouth sampling to promote interest and success for the sensory room. The author created two different surveys on google forms. The first survey was to grasp the baseline knowledge of the staff to determine where their understanding regarding the sensory room lies and how the author can create, improve, or implement changes to focus on the specifics required and requested by the staff. The second survey was a follow-up to the education on the sensory room protocol. This survey was to see if the staff felt an increase in confidence and understanding on how to utilize the various sensory tools within the sensory room. Both the surveys were anonymous and voluntary to take.
Statistics	The project surveys showed that there was an increase in staff confidence and understanding of what sensory items are used to help with calming and alerting residents having difficulties with emotional regulation. Staff was able to note that there are multiple purposes to the sensory room.

Ethics and Privacy	All participation was voluntary for education, surveys, and sensory room interactions. All data collected was anonymous with no identifiable information. All resident and staff participation interactions that contributed to the expansion of this capstone project adhered to the facilities' rules and regulations, admission intake consent forms, policies and procedures, HIPAA, and the AOTA code of ethics to maintain ethical and legal considerations.

Calming Sensory Tools	**Alerting** Sensory Tools

• Wall Squares
• Watercolor Tiles
• Lavender Scented Lotion
• Lollipops
• Shaving Cream
• Sand Art Picture Frame
• Sensory Brushing
• Music
  • Nature Sounds, Folk Pop,
• Fidget Toys
• Bubble Tube
• Fidget Dog
• Fiber Optic Lamp
• Aromatherapy
  • Lavender, Chamomile, Rose, Vanilla, Eucalyptus, and Jasmine
	• Citrus Lotion
	• Aromatherapy
	  • Orange, Lemon, Peppermint, Clove, Cinnamon and Patchouli
	• Listerine Tabs
	• Textured Plastic Tiles
	• Spinning Wall Art
	• Space Projector
	• Music
	  • Heavy Metal, Electronic Dance Music
	• Sun Light
	• 3D Pin Impression
	• Egg Shaker
	• Guiro Fish Instrument
	• Wood Drum Set

Five Sense	Definition	Examples
Tactile/Touch	Tactile/touch response is defined as receptors that are located within the skin and are activated by skin contact such as skin to skin contact, types of clothes, and brushing (Carson, 2019).	• Using brushing techniques to stimulate the skin, can help with calming residents down. • Use of citrus lotion to alert the resident
Visual/Sight	Visual/sight response is defined as receptors that are located within the eye and the response the visual receptors have to light, colors and shades (Carson, 2019).	• The bubble tube with fish, can be used as a way to calm the resident by allowing them to sit there and watch the bubbles, fish and colors change/move. • Having the sun light on while working with residents can increase their participation
Auditory/Hearing	Auditory processing is defined by the auditory receptors that are located within the inner ear and how they are affected by various sound waves and vibrations (Carson, 2019).	• Allowing the resident to listen to music can be calming OR alerting for them. • An example that the author often uses is that screamo music is not going to have

		calming effects but be alerting, whereas nature sounds will provide great calming effects.
Gustatory/Taste	Gustatory/taste receptors are composed of taste buds that integrate chemical responses when eating, drinking, and chewing (Carson, 2019).	• Sweets like lollipops are great for calming a resident and providing stimulus to the mouth • Sour or strong flavors such as peppermint listerine tabs will provide more of an alerting outcome. * Always be with your resident when food is involved. Do not leave unattended!*
Olfactory/Smell	Olfactory/smell receptors are composed of chemical receptors, which detect various environmental aromas through breathing in air and osmoreceptors	• Use of aromatherapy can be a nice way to calm residents but also alert them. • Scents such as lavender, chamomile, bergamot and

	which detect osmotic pressure changes (Carson, 2019)	eucalyptus are great for calming a resident. • Scents such as Orange, Lemon, peppermint and cinnamon are great for alerting residents.
Considerations	*Always remember that everyone is different, and some individuals may think that peppermint is calming whereas others do not, same with lavender some may find it relaxing whereas others may find it alerting. It is important to understand what your specific resident likes and dislikes to best fit their specific needs. Always be aware of their dietary restrictions, allergies and verbal/nonverbal communication because by understanding the resident and their needs will help you identify the most appropriate sensory tools to increase their goals when it comes to emotional regulation* It might take a trial-and-error process to determine the residents' verbal and non-verbal responses. Please be patient with yourself and the resident as it may take a few tries, but once you find the right fit the outcomes are worth the effort, the author promises!	

Appendix H

Henderson Health and Rehabilitation Informal Protocol

Table of Contents

Sensory Room Introduction

The **sensory room** is a place to provide sensory tools to residents that are having difficulty regulating their emotions. By using this guide, you as the caregiver can help provide the right sensory tools to benefit the resident with what specific behavior they are needing to work towards.

- Sensory cabinet is organized by the five senses, with each bin being labeled by sense (touch/tactile, sight/visual, smell/olfactory, taste/gustatory and hearing/auditory). The description of each item mentions the input it provides, allowing for the caregiver to identify in which bin it can be found. For example, the brushing description states it provides touch input, therefore the brushes can be found in the "touch/tactile" bin.
- The recommended time of use may vary depending on resident's engagement and/or reaction to the input. These times may be extended or shortened in response to what you observe as to the resident's needs.
- These activities may be repeated throughout the day as well. It may benefit the resident to identify trends of times at which the resident may benefit from initiating these activities consistently. (ie afternoon during possible behavior elevations/ "sundowning").
- It is important to understand what your specific resident likes and dislikes to best fit their specific needs. Always be aware of their dietary restrictions, allergies and verbal/nonverbal communication because by understanding the resident and their needs will help you identify the most appropriate sensory tools to increase their goals when it comes to emotional regulation*

- It might take a trial-and-error process to determine the residents' verbal and non-verbal responses. Please be patient with yourself and the resident as it may take a few tries, but once you find the right fit the outcomes are worth the effort, the author promises!

Sensory Brushing is a technique that is performed using a soft bristled brush/sponge combination tool by a caregiver. This tool provides touch input and can be used as calming. This technique has been found to be most beneficial to individuals who are overstimulated which may present as pacing, agitation, or restlessness.

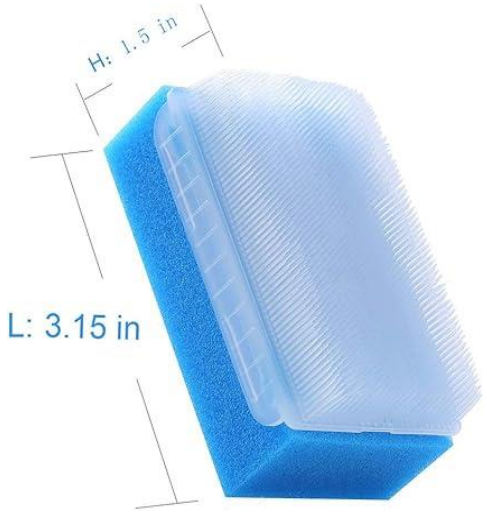
Instructions:

1. Hold brush sideways
2. Use gentle pressure (just enough to bend the bristles of the brush)
3. Brush each arm, leg and palm of hands as much as residents allow, but start from top of the limb and continue without picking the brush up to bottom of the limb, repeat again for 10 times or until the resident changes expression.
4. Move to the next area.
    a. While protocol calls for full limb, you can modify it to include a small area such as the forearm instead of the whole arm.

Recommended Time of Use: 10 times per limb

Safety Considerations:

- Test brush to make sure it is not scratchy.
- Avoid open skin and rashes
- Watch for redness and discontinue immediately if redness is present
- Avoid the neck, stomach, spine, chest, face and head.
- Do not force continued usage, if the resident pulls away or has changes in facial/emotional responses.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Music is an option for providing auditory sensory input. It can be both calming and alerting, depending on the resident. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks. This tool may be effective with individuals who may be overstimulated which may present as pacing, agitation, and restlessness.

Instructions: Determine which music tool is likely beneficial for the resident. Keep in mind that what is calming for some may not be calming for another. For example, a soundscape with a thunderstorm and rain may be calming to someone, but may be frightening to someone else. Watch for nonverbal responses, including facial expressions, movements, covering ears, etc. Additionally, volume may be a factor as some will need higher volume input while others may be disturbed by loud sounds. When utilizing music as a sensory tool, time may vary depending on resident reaction, but can range from 5-50 minutes.

- The radio provides multiple options for music kinds (rock, country, easy listening, latin, pop, etc). Consider changing the stations every few minutes until you observe the resident's response to be the desired response (i.e calming and alerting). You may also choose to allow the resident to change the stations themselves, considering their level of function.
- The Alexa also provides a variety of music kinds. You can say “Alexa play calming music” or “Alexa play dance music” vs switching stations. This allows for continuation of type of music with less interruptions/changes.

Recommended Time of Use: 5-50 minutes

Safety considerations:

- Be careful to avoid resident interaction with power cords.

Fidget Toys are various items that provide an opportunity for the user to manipulate and interact without an end goal, providing an aimless or mindless opportunity for engagement. This tool may be effective for individuals who are exhibiting behaviors including picking at themselves, touching others, rummaging.

Instructions: Provide a small variety (2-4) tools within the resident's reach to provide choice and allow for the user to explore and interact with them. You may need to demonstrate by interacting with the tools yourself while they watch.

Recommended Time of Use: 10-45 minutes

Safety Considerations:

- Avoid allowing for any of the fidget tools to be placed in resident's mouth
- If tools get broken/torn and have any sharp edges or can be considered a choking hazard, remove from sensory bins and alert supervisor for disposal and reorder.

Bubble Tube is used as a visual sensory tool. Watching the bubbles, colors and fish can allow for calming or distraction. This tool may be effective for those who are exhibiting behaviors including restlessness.

Instructions: Position resident in front of tube, either sitting or standing considering resident's level of function. Encourage resident to watch the objects inside. You may say "look at the fish!" or "do you see all the bubbles?" This tool may be used with lights on or off.

Recommended Time of Use: 30-60 minutes

Safety Considerations:

- Use caution to avoid resident pushing or pulling on the tube.
- If water spillage or leakage is observed, remove resident and alert supervisor.
- Be careful to avoid resident interaction with power cords.

Fidget Dog is a dog-shaped stuffed animal that has various fidget items attached to it. There is also some weight to one side, which may be effective as a calming input. This tool may be effective for individuals who are exhibiting behaviors including agitation, restlessness, picking at themselves, touching others, rummaging.

Instructions: Ensure that resident is positioned safely in supported sitting. Place fidget dog in resident lap. Allow and encourage them to manipulate and interact with the tool.

Recommended Time of Use: 10-45 minutes

Safety considerations:

- Be sure to complete hand hygiene prior to and following use for infection prevention.
- Avoid allowing for any of the fidget dog to be placed in resident's mouth.
- If tools get broken/torn and have any sharp edges or can be considered a choking hazard, remove from sensory bins and alert supervisor.
- Be aware of any potential fears of animals which may make this tool inappropriate for use.

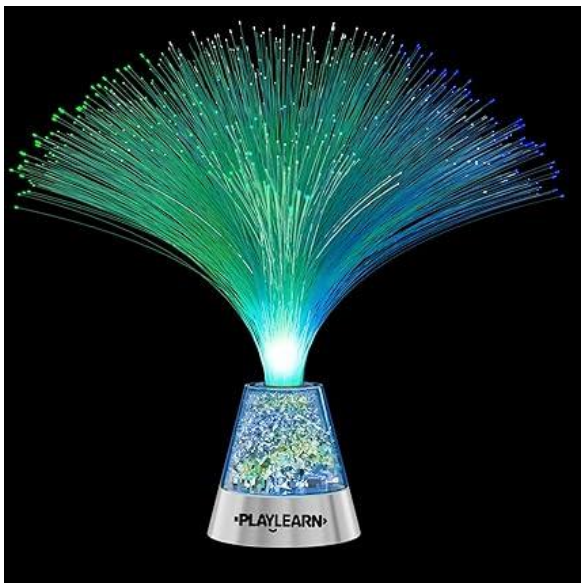
Fiber Optic Lamp is used as a sensory tool to watch the color changing lights. This tool can allow for calming or distracting. This tool may be effective for those who are exhibiting behaviors including restlessness.

Instructions: Position resident in front of lamp, either sitting or standing considering resident's level of function. Encourage resident to watch and touch the object. You may say "look at the colors!" or "do you see them changing?" This tool may be used with lights on or off.

Recommended Time of Use: 10-60 minutes

Safety Considerations:

- Use caution to avoid resident pulling on the fibers.
- Be careful to avoid resident interaction with power cords.



Aromatherapy is an option for providing sensory input through the sense of smell. It can be both calming and alerting, depending on the resident. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks. This tool may be effective with individuals who may be overstimulated which may present as pacing, agitation, and restlessness.

Instructions: Determine desired outcome of use of aromatherapy (calming, alerting). Identify which oil to use for this outcome. For example, lavender is calming to the majority of people while orange/citrus is alerting for most. Once appropriate smell has been identified, remove lid to ensure diffuser has water and place 3-5 drops of oil into water. Replace diffuser lid and choose level of diffuser output (mist, high, low). It is also an option to provide aromatherapy along with massage, which is also providing sensory input. Two scented lotions have been provided in the sensory room, lavender for calming and orange for alerting. To do this, first identify the desired smell and then gently apply scented lotion to hands, assisting to rub in considering resident's level of function.

Recommended Time of Use: 30-60 minutes

Safety Considerations:

- Do not use oil directly on skin, use a carrier such as lotion to help decrease intensity of oil. Test lotion on small area of the skin prior to applying to large areas. If redness is present discontinue use and notify nurse.
- Beware of resident allergies
- Avoid open skin and rashes
- Avoid resident sitting too close to the output of the diffuser
- Be careful to avoid resident interaction with power cords.


TEA TREE
CLOVE
ORANGE

Wall Squares are a variety of squares hanging on the wall with different textures. These may be utilized to provide touch input for either calming or alerting. This tool may be effective for individuals with behaviors including restlessness, picking at themselves, rummaging, and agitation.

Instructions: Position resident in front of wall at arm's length of tiles. Encourage resident to touch various squares while observing reaction to each. You may use descriptive words while they touch them, such as "this one is soft" or "this one is smooth". The tiles may be removed from their hooks in order to allow resident to interact in their lap as opposed to affixed to the wall. It may be appropriate to remove only the ones you notice that they prefer and allow them to hold them. Be sure to replace the tiles after use to avoid them being misplaced.

Recommended Time of Use: 10-60 minutes

Safety Considerations:

- Avoid allowing for any of the wall squares to be placed in resident's mouth
- Assist resident with taking square off the wall to avoid tearing or the hook coming loose from the wall.
- If tools get torn and can be considered a choking hazard, remove from wall and alert supervisor.

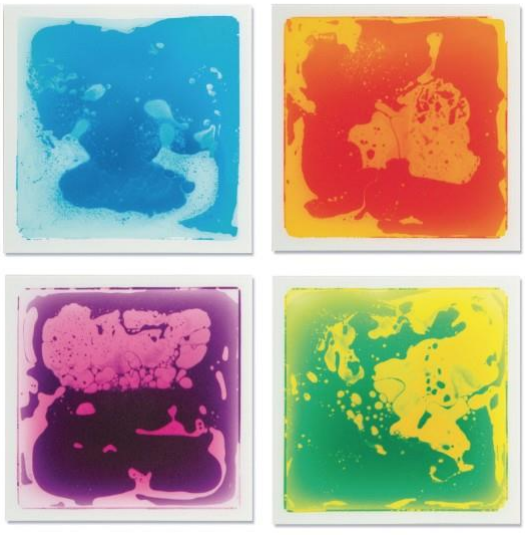
Watercolor Tiles are portable squares which contain liquid and color which react to touch/pressure. These tools can provide touch and visual input and can be used as calming. This technique has been found to be most beneficial to individuals who are overstimulated which may present as pacing, agitation, or restlessness.

Instructions: Place small variety (2-3) on table within reach of resident. Encourage resident to touch/press on tiles to produce the result of the colors moving within. You may comment on the reaction as it happens "look, it's moving!" and encourage repeated interaction "push on this one!" These items may be placed in the resident's lap as well.

Recommended Time of Use: 10-30 minutes

Safety Considerations:

- Avoid allowing for any of the tiles to be placed in resident's mouth
- If tools get broken and begins to leak or can be considered a choking hazard, remove from sensory bin and alert supervisor.



Shaving Cream is a cream in a pressurized can which can be placed on items for touch input and can be used as calming. This tool may be effective for individuals who are exhibiting behaviors including agitation, restlessness, picking at themselves, touching others. Might use this tool with individuals who are obsessed with washing their hands and putting fingers in their food.

Instructions: Position resident within reach of table and spray shaving cream onto table. Encourage resident to spread shaving cream around on table using palms of hands or fingers. You may encourage them to use their fingers to draw or write in the shaving cream once it's spread around. You may also encourage them to squish it between their hands for more input. An additional option is to provide the resident with a dry washcloth or towel to encourage them to wipe it off the table when finished. Another variation of this activity is to place small objects in a bowl or basin and then spray shaving cream inside, then encourage the resident to find the objects.

Recommended Time of Use: 10-45 minutes

Safety Considerations:

- Beware of resident allergies
- Avoid open skin and rashes
- Avoid allowing resident to put it in their mouth, supervise at all times to avoid accidental ingestion

Sand Art Picture Frame is a large frame which has sand and water inside and allows for the sand to fall from top to bottom when turned. This provides visual input and can be used as calming.

Instructions: Hold the frame in front of resident where they can easily see it. Turn the frame upside down and encourage the resident to watch as the sand falls. You may allow the resident to hold it themselves, considering their level of function.

Recommended Time of Use: 10-50 minutes

Safety Considerations:

- If tool gets broken and has any sharp edges or begins leaking, remove from sensory room and alert supervisor.
- Supervise resident with use, especially if allowing for them to hold it to avoid it being dropped or otherwise damaged.

Listerine Tabs are small slips of flavored material which consist of spearmint and peppermint which dissolve in the user's mouth. These can be used as alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Using gloves, remove tab from container and encourage resident to open their mouth. Encourage the resident to touch the tip of their tongue to the tab, and monitor reaction. If reaction is favorable place rest of tab inside resident's mouth and encourage them to close their mouth in order to dissolve. If resident shows signs of immediate distress, throw away the rest of the tab and provide resident with favorable beverage to help decrease intensity of flavor. Always make sure with nursing what kind of diet resident is on before providing food or drinks.

Recommended Time of Use: 5-10 minutes or until the tab is completely dissolved in the resident's mouth.

Safety Considerations:

- Be aware of dietary restrictions, textures and allergies, always check with the nurse re: this prior to initiation.

Textured Plastic Tiles are plastic tiles that have various textures on each. They have high and low spots which provide different touch input when the user's hands/fingers are run across them. These tools can be used as alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Place tiles on table within reach of resident. Encourage resident to touch and run their fingers/hands along the different textures. You may use descriptive words while they interact with the tiles such as "this one has bumps" or "this one has ridges". These items may also be placed in the resident's lap.

Recommended Time of Use: 10-60 minutes

Safety Considerations:

- Avoid allowing for any of the tiles to be placed in resident's mouth
- If tools get torn and can be considered a choking hazard, remove from sensory bin and alert supervisor.

Spinning Wall Art is a large piece of carved wood which is attached to the wall and is spun to activate movement. This tool provides visual input and can be used as alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Position resident in front of wall art taking into consideration any visual impairments they may have. Spin the art and encourage the resident to watch as the tool spins. You may need to spin the art more than one time as long as the resident remains interested. You may use verbal encouragement throughout this such as “look at it spin!”. You may want to encourage other techniques such as deep breathing or music, see music section above if this option is used.

Recommended Time of Use: 15-30 minutes

Safety Considerations:

- Avoid allowing the resident to touch object while spinning to decrease risk of injury
- If tools get broken and have any sharp edges remove from wall and alert supervisor.

Space Projector is a light tool which creates a series of colors being projected onto the walls and ceiling of the room in which it is used. It also has a music option through a Bluetooth connection. See “Music” section above if utilizing this option. This tool provides visual input and can be used as calming or alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks. This technique has been found to be most beneficial to individuals who are overstimulated which may present as pacing, agitation, or restlessness.

Instructions: Position resident in the room and the projector on the floor or a table inside the room. If bright outside, close the blinds and activate the projector using the on/off button. There is also a remote available to allow for you position yourself in close proximity to the resident prior to activating. Encourage resident to watch the moving lights and promote interaction with you throughout. You may encourage the resident to point to the lights or say the colors they see.

Recommended Time of Use: 10- 60 minutes

Safety Considerations:

- Be careful to avoid resident interaction with power cords.
- If tool gets broken and has any sharp edges, remove from sensory bin and alert supervisor.
- Supervise resident with use, especially if allowing for them to hold it to avoid it being dropped or otherwise damaged.
- Do not use with any resident that has a seizure disorder.

Sun Light is a portable tool which emits light at a frequency which is intended to mimic sunlight and improve mood. This tool provides visual input and can be used as alerting. It is adjustable for light intensity. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Place light on table using stand provided. Position resident in front of light and turn it on using the + and - symbols on the light. Adjust brightness as needed, it is best to start with a dim light and work your way up to brighter light. Encourage resident to experience the light using statements like “doesn’t that feel good?” “it feels like the sun is shining on us”. You may use this tool in addition to other tools such as fidget tools to keep the resident engaged while sitting in front of the light. Set the timer for 30 minutes if desired by pushing the button between the + and - symbols on the light.

Recommended Time of Use: 5-30 minutes

Safety Considerations:

- Be careful to avoid resident interaction with power cords.
- If tool gets broken and has any sharp edges, remove from sensory bin and alert the supervisor.

3D Pin Impression is a tool which consists of plastic pins housed in a plastic frame which move to adjust to pressure, which allows for the ability to make impressions which stay until the pins are reset. This tool provides touch input and can be used as alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Position the resident safely in supported sitting. Hold the tool near the resident and demonstrate how the pins can be moved as well as how you can hold your hand against it while flipping the frame to allow the pins to adjust to the shape of your hand. Encourage resident to try touching or holding the tool themselves. This may take multiple demonstrations.

Recommended Time of Use: 5-20 minutes

Safety Considerations:

- If tool gets broken, remove from sensory bin and alert supervisor.
- Supervise resident with use, especially if allowing for them to hold it to avoid it being dropped or otherwise damaged.
- Avoid open skin and rashes
- Avoid allowing resident to put it in their mouth

Egg Shaker is a small handheld instrument which creates a sound when shaken. This tool provides touch and sound input and can be used as alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Position resident either in supported sitting or in safe standing. Demonstrate shaking the egg in your hand before handing at least one to the resident. Encourage the resident to shake the egg in order to produce the sound. You may use this tool in addition to music in order to provide the resident a rhythm or beat to shake along to. Use "Music" section above if utilizing this option.

Recommended Time of Use: 5-30 minutes

Safety Considerations:

- Avoid allowing resident to put it in their mouth
- If tool gets broken, remove from sensory bin and alert the supervisor.
- Supervise resident with use, to avoid it being dropped or otherwise damaged.

Guiro Fish Instrument is a small handheld instrument which has a small mallet that is used to strike or rub along the instrument in order to produce sound. This tool provides touch and sound input and can be used as alerting. This tool has been found to be effective with individuals who may be understimulated which may present as fatigue, sleepiness, lack of participation in tasks.

Instructions: Position resident either in supported sitting or in safe standing. Demonstrate holding the fish in one hand while using the mallet with the other hand before handing one to the resident. Encourage the resident to strike the fish or run the mallet along the ridges on the fish in order to produce the sound. You may use this tool in addition to music in order to provide the resident a rhythm or beat to shake along to. Use "Music" section above if utilizing this option.

Recommended Time of Use: 5-30 minutes

Safety Considerations:

- Supervise resident with use, especially if allowing for them to hold it to avoid it being dropped or otherwise damaged.
- If tool gets broken and has any sharp edges, remove from sensory bin and alert the supervisor.
- Avoid allowing resident to put it in their mouth

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