Advancement of Clinical Skills and Interoceptive Assessments at Cincinnati Children's College Hill Campus

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Abstract

Cincinnati Children's Medical Hospital Center is known throughout the country as one of the leading medical centers for providing current evidence based pediatric care. Every department is responsible for having research teams in charge of finding literature to support best practices being utilized at the clinic. This capstone project aims to create an evidence based binder of interoceptive assessments to bridge the gap between occupational therapy services and mental health settings. The binder was created for the Translating Research and Clinical Knowledge (TRACK) team, a group of occupational therapists at the College Hill campus that work to advance research in mental health. The capstone student also gained clinical skills within a pediatric mental health setting during the capstone experience. Advancing skills in this setting will situate the student as a potential leader to advance the field of mental health into other settings. These skills help to advance the profession of occupational therapy by being able to address mental health during all sessions and settings. The capstone student was able to advance skills through leading group sessions, attending rounds, administering standardized assessments during evaluations, and completing one on one treatment sessions. The capstone student worked alongside other occupational therapists on site to ensure all groups were covered each day and that everyone's caseload was equal for the day. This capstone project also helped to bring awareness to the work occupational therapists can accomplish in mental health settings.

Keywords: Occupational therapy, inpatient mental health, pediatrics, interoception, clinical skills

Interoception in Mental Health Settings

According to a study conducted in 2020, a youth dies by suicide every 33 hours (Ohio Youth, n.d.). Nearly 20 percent of high school students have thoughts of suicide, with 1 in 10 following through with these thoughts. Even more alarming, there has been a fivefold increase in suicide attempts seen in ages 10-12 in the past ten years (Ohio Youth, n.d.). Mental health continues to be a poorly addressed issue within the United States, with a common issue being an alarmingly high readmission rate after discharging from an inpatient psychiatric hospital. A 2019 study found a 1-year readmission rate of 32.4 percent and a 30-day readmission rate of 10.2 percent. Some of the areas contributing to these readmission rates lie with decreased awareness of one's body/emotions and how to appropriately respond to stressful life events. The lack of available mental health services exacerbates symptoms in patients and can leave populations at greater risk of experiencing mental health crises (Blader et al., 2019).

The impact on mental health by participating in meaningful activities, both children and adults, is an important part of what occupational therapy does. For people to engage in these occupations, they must be in the right mental state. Some examples of where occupational therapists provide mental health services include communities, hospitals, schools, clinics, homes, and other places where people carry out daily activities. Cincinnati Children's Hospital utilizes mental health services. Cincinnati Children's College Hill is the only residential treatment facility that is integrated into a pediatric-focused hospital within Ohio. This institution helps youth manage mental illnesses by fostering healthy decision-making, creating opportunities for expressing emotions, and increasing the ability to live a healthy life through creative group programming and individual sessions. This specific site provides a safe environment for children and adolescents who need a longer period of treatment that cannot be provided within an

inpatient setting (Cincinnati Children's, n.d.). According to the American of Occupational Therapy Association (AOTA), there are certain guidelines that occupational therapists (OT) should follow when providing mental health services. Assessments should be performance-based to evaluate the needs of clients while also analyzing environmental and contextual factors that have the potential of impacting mental health and wellness. Interventions should be client-centered that lead to improved mental health and participation in meaningful activities (Aota, n.d.).

There is an alarmingly high hospital readmission rate among youth with mental health conditions. People who have experienced trauma in their lives often are not sure how to properly take care of themselves and listen to what their body is saying (Owusu et.al., 2022). During the needs assessment interview, it was stated that there are currently inconsistencies with the implementation of care and lack of patient involvement in group sessions. High readmission rates and decreased understanding of one's own body may be addressed through interoception interventions. The capstone student's purpose for this capstone was to advance clinical skills with this population, as well as coordinate with the TRACK team at Cincinnati Children's to determine evidence-based interventions targeting interoception to improve implementation of care and increase participation within group sessions.

Needs Assessment

The Process

The process utilized for the needs assessment included finding the gap, determining the problem and purpose statements, and identifying supporting literature. The capstone student relied on professors, previous capstone students, and the staff at Cincinnati Children's College Hill to effectively complete these steps. The capstone student first completed an initial interview

with staff at Cincinnati Children's to determine a gap at the site. Upon completion of the interview, they determined the gap to be a lack of education on implementation of interoception into intervention sessions. The student reviewed literature on the use of interoception in pediatric inpatient psych hospitals which informed the capstone project.

Community and Service Profile

Cincinnati Children's Hospital Medical Center (CCHMC) is a non-profit hospital located in Cincinnati, Ohio. This hospital has received multiple awards for its contributions towards advancements in research and proper care. They are ranked number one in the nation and are ranked in the top ten for all specialties. The U.S. News and World Report ranked CCHMC as the best children's hospital last year (Cincinnati Children's Hospital, n.d.). Cincinnati Children's has multiple outpatient locations throughout the tristate area, but this capstone occurred at the College Hill Campus location. After renovations in 2023, this building has five floors and one hundred inpatient beds plus thirty residential beds. Each floor has different specialties and levels of diagnosis. Floor 1 houses the main lobby, cafe, gym, art room, and family resource room. Floor 2 houses all outpatient services. Floor 3 houses 16 inpatient units, 10 neurobehavioral inpatient rooms, and 16 spots for a neurobehavioral partial hospitalization program. Floors 4 and 5 house the inpatient rooms and allow family members to spend the night due to being all private rooms (Cincinnati Children's, n.d.). Additional programs include community and school-based programs, outpatient mental health management, intensive outpatient care, and partial hospitalization care. Various patients and diagnoses are seen here, with generalized anxiety disorder (GAD), intermittent explosive disorder, depression, schizophrenia, eating disorders, and trauma related PTSD. Patients come to this clinic for either outpatient services, partial hospitalization care (can go home during the day), or inpatient services. Inpatient services range

from 3-5 days to longer depending on the case. Regardless of the level of services, the patient requires, they have access to programs such as group therapy, music therapy, occupational, physical, speech, and recreational therapy, doctors, and behavioral health specialists.

While some diagnoses are congenital, there are other factors such as race, age, socioeconomic status, and traumatic life experiences that can contribute to a diagnosis of a mental health condition. According to the US Census Bureau in 2023 within the Cincinnati area, a. Almost 28% of the Cincinnati population is under 18, 25% of households currently live in poverty, and only 50% of the population identify as white (U.S. Census, n.d.). According to the needs assessment interview, the College Hill Campus accepts ages 3-17, with the most common patients being between the ages of 6 and 17. These are important factors to consider in developing mental health interventions.

Interview

Initial Site Interview

The purpose for conducting an initial site interview was for the capstone student to understand more about the site and the people they would be working with. The questions were designed to obtain information about the site such as most common diagnoses and the needs of the patients and staff. A list of the questions utilized during the interview are listed in Appendix A.

The needs assessment occurred over Zoom with an OT at College Hill site who had worked at the facility for over 10 years and would be the site mentor for the capstone student. The meeting started with the OT interviewing the capstone student to determine whether it would be a good fit for them. Some of the questions asked included why the capstone student became

interested in OT, what experiences they had in a mental health setting, and if they had any project ideas in mind. After this portion of the interview was complete, the capstone student asked needs assessment questions listed in Appendix A.

The needs assessment resulted in the project goal of addressing a lack of understanding therapists had on implementing interoceptive interventions. They were motivated to learn about the current literature and how it could be implemented into the facility at College Hill. This, along with other themes throughout the interview, are what guided the capstone student to collaborating with the TRACK team to find evidence-based interoception interventions.

Analysis of Interview

According to the OT in the interview, the productivity rate of the site is 65% and all OTs that work there are responsible for all units (ex: neuro, adolescent, general health). The culture, as described by the OT, is a supportive environment where they share caseloads when overwhelmed, have group documentation time, lots of flexibility, and ample time for documentation. Many group sessions occur at the site, as well as co-treatment sessions with speech therapists and behavioral health specialists. This information from the needs assessment interview provided the capstone student with important information about the culture of the organization prior to working there on advancing clinical skills.

The capstone student also learned during the interview that units within the building are separated by pediatrics and adolescents. OTs typically see people ages six and up, and the most common diagnoses seen include: generalized anxiety disorder (GAD), intermittent explosive disorder, depression, schizophrenia, eating disorder, comorbidities, PTSD, and trauma. When patients are discharged from inpatient services but are still not ready to go home, the facility

offers residential housing for longer term care. This is mostly used for crisis stabilization by creating a safe environment for the patients. The interview concluded with the capstone student suggesting interoception interventions that target emotion regulation. Dysregulation significantly impacted this population according to the staff OT, and patients typically needed support to learn self regulation skills.

Gap Analysis

Current State

Currently the site is working towards continued advancements in evidence-based interventions to implement with this population. The therapists are collaborating with the TRACK team at Cincinnati Children's, a team dedicated towards coming up with new ideas. The therapists collaborate and co-treat with both speech and behavioral health therapists. They often conduct services in large group settings and tackle writing notes together. Patients come in with different needs, so all interventions are tailored to individuals. The site currently provides emotion regulation and education interventions, with the purpose of providing a safe place, but does not use interoception interventions.

Desired State

The desired state of this facility is to be a place where the patients feel safe and comfortable, so that they can learn the skills necessary to be successful on their own. The site wants to improve the number of interventions available and improve their capacity for person-centered selection of interventions to ultimately have a better standard of care. The site was motivated for the capstone student to bring fresh perspectives on the current programs in place. The site also sought to incorporate interoception into existing intervention sessions as well as

education on how to help prevent readmission. Finally, the site was eager to add input from clinical students regarding current/relevant methods being taught in OT graduate programs in order to further enhance clinical skills.

Identified Gap

It was identified that there is a need for increased understanding of the role of interoception in emotion regulation. There are already emotion regulation interventions being performed, but patients are not learning how their body is reacting to these different emotions. This gap will be addressed by coordinating with the TRACK team to develop and implement interventions during group sessions. It was also noted that there is a gap between new graduates and experienced OTs regarding clinical practice; as such, and the site hopes to bring a fresh perspective from students to inform best practices being taught in graduate programs.

Literature Review

Introduction

Deficits with interoceptive processes can be linked to psychological disorders seen within mental health settings. Patients with a lack of interoceptive awareness often struggle with identifying these bodily signals in order to regulate and make certain decisions. Educating patients on how to identify these signals along with educating practitioners on how to assess deficits in this area will increase quality of care for these patients and improve their daily lives (Joshi et al, 2021). One main takeaway from the profession of OT is the use of evidence-based interventions. This is a vital part of providing the best care possible to patients. To stay evidence-based throughout this doctoral capstone progress, a literature review was completed to determine what evidence was out there to support the use of interoception in mental health settings. This

directly ties into goals created during the interview, which were to examine evidence and interventions that tie interoception to mental health practices. The databases used to complete this literature review include the National Library of Medicine (NIH), PubMed and Google Scholar. All articles screened and used within this literature review are peer reviewed and most are less than five years old. As literature review is being completed, it should be noted that there is a gap in the amount of current literature that uses interoceptive interventions in mental health settings. A 2021 study concluded that the role of interoception is relatively unexplored within a mental health setting and requires more research to be completed to determine effectiveness and confidence among practitioners (Joshi et al, 2021). The search terms used were pediatrics, mental health, occupational therapy, interoception, interoception interventions, and psychiatry. Articles were used to discuss a variety of topics, including definitions, best practices in mental health settings, interventions, and how OT ties into it. These articles were screened in order to meet the goals set during the interview and to support the integrity and validity of this capstone project.

This literature review supports the capstone student's project for advancements in clinical skills and use of interoception in mental health settings. The primary purpose of this capstone experience is for the student to gain clinical skill advancements in working through a mental health lens in order to apply these skills in all practice areas. As the literature will show, there are many statistics that prove having a background in mental health is beneficial within any OT session someone may work in. The secondary purpose of this capstone experience is education, where the student will work alongside the TRACK team at the College Hill Campus location to find evidence to support the implementation of interoception to improve occupational participation in kids with mental health symptoms. The main priority of the student's capstone is to advance clinical skills in the area of mental health with a secondary priority of finding

literature to support the use of interoception interventions and outcome measures in a mental health setting.

Advancement of Clinical Skills

The United States has continued to see a rise in serious mental health disorders over the years. A 2024 survey by Mental Health America found that 13 percent of youth aged 12-17 are experiencing serious thoughts of suicide. Along with this, 1 in 5 youths have had at least one major depressive episode in the part year with over half not reclining treatment for (The State of Mental Health, n.d.). All of these conditions affecting the youth population lead to an increased risk of having difficulties with navigating life as an adult. It is vital to address these mental health concerns early on in a child's life, so they can learn how to navigate it and work towards goals they have. It needs to be addressed in order to prevent further challenges and health effects later down the road (U.S. Department, n.d.). A scoping review discussed the importance of including OT in mental health settings in order to help patients navigate these challenges and changes in their lives. It defined OT as fostering health through enabling engagement in occupations. This occurs through the use of therapeutic interventions that are occupation based, occupation-focused, and occupation-centered. These types of interventions help improve the motivational aspect and help ensure that patients in childhood and adolescent age are learning proper skills needed to foster growth (Parsonage-Harrison et al., 2023).

It was mentioned in the needs assessment interview that Cincinnati Children's is constantly looking for new ways to improve their facilities and approaches to care. Since the build of the new facility last year, they are currently trying to expand on their intervention techniques and evidence-based care. They value input from new clinicians as they bring a fresh and innovative perspective to the situations. This capstone experience not only advances the

clinical skills of the doctoral student, but also for the licensed therapists currently practicing at Cincinnati Children's. Developing skills in this area will also allow the capstone student to take these skills into other areas of practice, further expanding the use of mental health in all areas of OT.

Education

The second part of the project is centered around advancing education on interoception. This includes both interoceptive interventions and specific outcome measures. Literature supports the use of interoception in improving all areas of occupations. Most research is centered around improvements in sleep, decreasing mental health symptoms, and intervention ideas. The following paragraphs will be used to dive into what current research is suggesting for these topics. In addition, the capstone site is interested in seeing what kinds of outcome measures are used that support using these interventions for improving interoception.

Interoception

Most people are instructed at a young age to use the main senses within the body: smell, touch, hearing, taste, and sight. What some do not learn is that there are other, more complicated, senses: proprioception, vestibular, and interoception. This capstone project is centered around interoception and how this sense plays a role in mental health. To begin diving into the literature, it is important to first define what interoception is. As defined in a study, interoception is "the process of how the nervous system senses, interprets, and integrates signals and information that originates from within the body" (Schmitz et al., 2023). Many practitioners have started utilizing this sense into their practice, including mental health and sensory health practitioners. Current practice includes looking at how sensory processing can impact body functions and structures

which affect participation in daily life. Recently interoceptive awareness is also being connected to executive functioning and overall participation in daily activities (Clark et al., 2022). Further, interoceptive awareness relates to self-regulation in terms of how emotions are perceived and applied (Mahler et al., 2022). More about these factors will be discussed in detail later on. All of these studies highlight key terms used in the occupational therapy profession, hence giving rise to its consideration of use.

Interoceptive capacity acts in the body by allowing basic functions to be automated while a person is interacting with the external environment. These signals being sent by the body are essential for regulating physiological functions such as heart rate, digestion, and body temperature. It also takes into account different psychological experiences such as valence, emotion, and motivations. The behavior a person demonstrates based on these signals often plays a key component in meaningful participation. Schmitz et al. (2023) discusses in his article an example of how interoception can cause different responses to an interaction. When a person is approached by someone they consider a friend, it is easy to converse and spend time with them. This is because the body is sending signals that they are safe and sparks memories of past shared experiences. If they were to have this same interaction with someone whom they have had a traumatic experience with, the body would react differently. They would probably want to flee because the body would be sending signals that the person is not safe (ex: clinched muscles, fast breathing, and increased heart rate.)

This is how interoception helps navigate surroundings and personal interactions. When a person experiences a mental health condition/crisis, this system is often out of regulation. In a study utilizing children who have experienced a traumatic childhood experience, body dissociation was linked with emotion dysregulation. It supports the use of interoception

interventions to help children overcome difficulties with emotion perception and regulation. Interventions that target interoception can help people regain independence and take control of their lives (Schmitz et al., 2023).

Interoception and Sleep

Sleep helps to regulate our hormones and emotions throughout the day. Not having regulated sleep impacts other areas of occupations and is an integral part of OT treatment (U.S National, n.d.). According to Arora et al. (2021), sleep-wake activity is regulated by the hypothalamic region within the brain and is responsible for endocrine function, internal body temperature, inflammation, and autonomic nervous system function (Arora, 2021). Along with this, a 2020 study found that sleeping in a warmer environment can dysregulate a person's body and lead to poor sleep quality due to this link to the autonomic nervous system (Elsevier et al., 2019).

Impairments in sleep can lead to more serious diseases, including obesity, dementia, cancer, and mental health symptoms (Arora, 2021). Nayok et al. (2023) found other literature suggesting that sleep impairments can also lead to anxiety, depression, eating disorders, trichotillomania, and substance use disorder. Elsevier et al. (2019) suggests taking into account the type of clothing and bedding someone is using if they have difficulty sleeping. Opting for more breathable material could help improve symptoms associated with dysfunction of the autonomic nervous system. Patients who have chronic sleep deprivation also tend to develop physical pain as a result of its link to interoception. Sleep deprivation affects interoception, and disordered sleep can lead to altered interoception. The pain coupled with lack of sleep contributes to mental health symptoms (Elsevier et al., 2019). While many studies have

determined that interoceptive skills help mediate the relationship between sleep and certain psychological disorders, there is a huge gap in the literature for this topic.

Interoception and Mental Health Symptoms

When someone is experiencing mental health symptoms, they often struggle converting thoughts/feelings into words, leading to a decreased feeling of being understood by healthcare practitioners (Nayok et al., 2023). As mentioned in the problem statement, Cincinnati Children's is looking to enhance interventions targeted towards interoception in order for patients to understand how their body is reacting to things. This will hopefully allow them to learn how to self-regulate themselves. A disclaimer found among multiple articles states that to use these interventions, a person must have metacognition (Nayok et al., 2023). They must be able to reflect on experiences, make judgements about their outcomes, and describe them through different types of responses.

Dysregulation with anxiety occurs when a person experiences symptoms such as palpitations, dizziness, and fatigue (Nayok et al., 2023). These signals get sent to the autonomic nervous system where it is supposed to help regulate. When someone lacks interoception capabilities, it further dysregulates the body and can catastrophize symptoms. Some evidence-based interventions that prove effective in treating this include cognitive behavior therapy, biofeedback, relaxation, mindfulness, floatation, yoga, and respiratory training (Nayok et al., 2023).

Effectiveness

A 2018 study summarized various randomized controlled studies that looked at how interventions targeting interoception could help improve mental health symptoms. The results of

these studies are summarized here. Three studies using interoceptive exposure saw statistically significant decreases in anxiety symptoms. Another study saw decreases in binge eating symptoms while using self-monitoring interventions. The next study used mindful awareness in a body-oriented therapy program in order to decrease symptoms associated with substance use disorder (Nayok et al., 2023). A 2022 study also demonstrated the effectiveness of mindfulness training focused on awareness of body sensations and breath to decrease anxiety symptoms by improving interoception sensibility (Lima-Araujo et al., 2022). A systematic review concluded that fifteen out of thirty-one articles had increased mental health symptoms among those participating in interventions linked to interoception. During a follow-up with the same participants, 37.5% still reported improved mental health symptoms (Heim et al., 2023). All these interoception interventions targeting various mental health symptoms showed a decrease in symptoms across the board. This supports the capstone student's purpose in finding evidence-based interventions to help with reducing mental health symptoms in adolescent youth. However, in order to measure the effectiveness of interventions there have to be standardized outcome measures used. This leads to the main purpose and project for the capstone student at Cincinnati Children's.

Outcome Measures

Use of outcome measures in occupational therapy helps to support clinical observations and leads to credibility with what interventions are being used. Using outcome measures helps to enhance an evaluation by developing a systematic approach to measuring the effectiveness of treatment (Law et al., 2024, p. 4). As mentioned above, one of the main gaps seen at Cincinnati Children's currently is information on interoception, more specifically with outcome measures. A systematic review found that the 3 most frequently used measures for interoception were:

Multidimensional Assessment of Interoceptive Awareness (MAIA), Five-Facet Mindfulness Questionnaire (FFMQ), and Scale of Body Connection (SBC). Most assessments used were self-reported questionnaires utilized for the duration of patients' treatment. Other mental health assessments were utilized; however, they were not directly measuring changes with interoception (Heim et al., 2023).

What type of outcome measure used depends on which body sense is trying to be addressed. Someone working on body accuracy, or reliably discriminating interoceptive signals from other competing signals, would require a different outcome measure than someone working on self-efficacy, or having the confidence to focus on a sensation (Khoury et al., 2018). The most widespread outcome measure used is the MAIA. This assessment aims to measure interoceptive sensibility by including various facets that fit under its umbrella. These facets include noticing, not-distracting, not-worrying, attention regulation, emotional awareness, self-regulation, body listening, and trusting. While some studies have concluded that this version is out of date, others state that it is still a valid and reliable tool to measure interoception. A newer version, MAIA-2, has also been introduced recently due to potential gender biases seen in older versions (Rogowska et al., 2023).

The FFMQ was also mentioned above as a common assessment tool utilized for measuring interoception. This is a 39-item instrument used to assess five areas of mindfulness: observing, describing, acting with awareness, non-judging, and non-reactivity to inner experience. While not explicitly measuring interoception, it aims to measure how one interacts with their body and utilizes mindfulness as a calming strategy (Shallcross et al., 2020). The SBC was the final most common assessment utilized for measuring interoception. This assessment measures a person's connection to their body to work towards increasing body awareness. It is a

self-reported questionnaire that quantifies how high someone's body dissociation is ("Scale of Body Connection," n.d.).

As seen by the above paragraphs, there is no one assessment method utilized for measuring interoception. Just as no two people are the same, neither are assessments. It is important to take into consideration what the client, environmental, and temporal factors are prior to utilizing an assessment. The three assessments described in detail above are utilized as more general assessments that provide an overview of all the senses associated with interoception and how someone feels in their body. As a clinician begins to form a rapport with their patient and understand where their deficits lie, there are more specific assessments that could be utilized instead.

Conclusion of Literature

Mental health and well-being are an important part of the Occupational Therapy Practice Framework. OTs help clients manage both physical and mental health to develop effective daily routines to navigate their lives (American Occupational Therapy Association, 2020). The literature review summarized above supports the use of interoception in all areas of occupations, and the need for more current outcome measures and interventions. The gap discussed during the needs assessment interview was a lack of interoceptive interventions and outcome measures used in a psychiatric setting. Completion of this capstone project will help address this gap while building clinical skills of the capstone student.

Model/Guiding Theory

After completing the gap analysis with College Hill and determining learning outcomes, the student selected the Ecology of Human Performance to guide their project. This model aligns

with the core values and mission of Cincinnati Children's by emphasizing the importance of being client centered and holistic. The EHP model focuses on how the environment influences a person's engagement in task performance. "The EHP model invites practitioners to consider the role of various settings on task performance, including consumer, community-based, and wellness services" (Cole & Tufano, 2020). The model focuses on preventive and rehabilitative intervention approaches that look at activities of daily living (ADL), instrumental activities of daily living (IADL), work and productive activities, education, leisure/play, and social participation. Unlike other models that focus on how person, task, and environment impact one another, the EHP model focuses on the role of context and how this impacts a person when completing task performances.

The model is broken down into 4 parts. Part 1 states a person is an individual with unique skills that fall within the domains of sensorimotor, cognitive, and psychosocial. Persons are capable of engaging in tasks while also engaging within their environment. Part 2 defines tasks as a set of behaviors needed to accomplish a set goal, where a person's internal variables help determine the ability to access tasks. They are the building blocks of occupations that lead to occupational performance. Part 3 describes contexts, which include temporal and environmental factors that make up a person's surroundings. Temporal aspects include age, developmental stage, health status, and a span of time where the task exists. Environmental aspects include any physical, social, or cultural factors that are influencing the person or task. Part 4 defines performance as the interaction between the person, context, and task. It is how a person's context/environment influences how a task is engaged in, and how this leads to human and task performance (Cole & Tufano, 2020).

As mentioned in the community profile, a lot of children seen at Cincinnati Children's have difficulties engaging within their environments. By using this model, the capstone student is able to highlight how a person's environment impacts their personal factors, including mental health. It keeps the person at the forefront and guides holistic thinking by suggesting the need to adapt to the environment and tasks rather than changing the inherent aspects of the person.

Capstone Project Plan and Process

Goals

The following goals were created throughout capstone courses prior to starting on-site. All goals were discussed with the capstone site for accuracy and relevance towards the project. The goals are as follows:

Project Goal 1: The capstone student will learn advanced clinical skills in pediatric mental health by working alongside the therapists at the College Hill campus and leading individual/group sessions.

Objective 1: The student will learn about the College Hill campus population through researching and communicating with the site mentor by completion of week 1.

Objective 2: The student will facilitate leading at least 2 group and individual sessions by week 7.

Objective 3: The student will be independent with screening, assessing, and treating clients in this setting by completion of capstone.

Project Goal 2: The capstone student will effectively work with the TRACK team to find evidence based interventions/outcome measures that target interoception within a mental health setting.

Objective 1: The student will engage in a discussion with capstone site mentor and TRACK team to determine where the gap in knowledge is by completion of week 1.

Objective 2: The student will research and report evidence based assessments and interventions for targeting interoception by week 7 of capstone.

Objective 3: The student will complete an assessment binder that targets interoception by end of capstone.

Project Goal 3: The capstone student will facilitate use of the assessment binder during all interoception based sessions to effectively bridge the gap between creation and implementation of new material by end of capstone.

Objective 1: The student will implement a pre survey to measure therapists' current knowledge and confidence with implementing assessments targeting interoception by the end of week 2.

Objective 2: The student will engage in an educational session with therapists to provide binder resources with tips on how to use it by week 9 of capstone.

Objective 3: The student will implement a post survey to measure therapists' confidence with implementing assessments targeting interoception to determine effectiveness of the project completed at this site by completion of capstone.

Process

In order to meet the goals and objectives highlighted above, the 14 week capstone experience was separated into weekly goals. The 14 week capstone experience took place from January 13 to April 18th, 2025. The capstone student completed orientation on January 13th and then completed the remainder of the capstone project on site. The primary focus of this capstone was advancements in clinical skills, so majority of the time spent on site was utilized for direct patient care.

The first week of capstone was spent observing evaluations, treatments, and group sessions. At the end of week 1 the capstone student was oriented to the TRACK team, which consists of a research team that aims to educate therapists on current best practices according to the evidence. Because this capstone has 2 areas of focus, time was spent working with the TRACK team to help coordinate the interoceptive group programming and building clinical skills through direct patient care. Weeks 2-3 consisted of continuing to orient to the facility and develop rapport with the youth who have longer stays. Weeks 4-6 consisted of working with the adolescent inpatient population and leading evaluations, 1:1's, and groups as the capstone student's confidence increased. By the end of week 6 the student was expected to be independent in working with the adolescent population. Weeks 7-8 were spent working with the pediatric inpatient population, and the capstone student was expected to be independent with this population by the end of week 8. Weeks 9-14 were spent carrying the full caseload and leading all groups assigned. Each therapist was responsible for covering all group sessions, typically spread evenly among everyone. The groups that the capstone student were responsible for were: 2 groups on Mondays, 1 group on Tuesdays, 1 group on Thursdays, and 2 groups on Fridays.

For the second focus of the project the student was expected to create a binder with current evidence supporting the use of assessments that target interoception. The student was

also expected to help TRACK with other current projects, including building the experiments, see Appendix E, and flow for the interoceptive group programming. During week 1 a qualtrics survey was constructed and sent out to the occupational therapists on staff. Results, see Table 1 and 2, were analyzed during week 2 and discussed with the TRACK team. From this point forward a weekly meeting was set up to discuss literature on interoceptive assessments in mental health settings. Throughout the capstone experience the student continued to explore literature to find assessments that could be beneficial for the age group/population type seen at College Hill. The student also worked with the TRACK team to develop the interoceptive programming. Each week included the same group of participants, so the programming was designed to build off of the previous week. Each patient was provided homework to complete each night that tied into the lesson learned for that particular week.

Implementation

The protocol for this project was submitted to the Institutional Review Board and received status of "not human subjects research". The IRB submission is located in Appendix B.

Clinical Skills Implementation

Throughout the capstone experience the student was able to observe multiple therapists in different settings to develop a well rounded, holistic understanding of each type of patient. Each therapist offered different insight into how they approach evaluations, lead group sessions, and decision making for tests and measures. This allowed the student to see a wide range of what could be implemented and helped with building a clinical skill~~s~~ set. Some areas the capstone student got to observe during the 14 week capstone included: adolescent inpatient, pediatric inpatient, neurobehavioral unit (NBU), and residential. The following paragraphs describe how the process was run on each unit and what kinds of diagnoses were most common.

Adolescent Inpatient Units

The typical stay for the adolescent inpatient units is typically 2-7 days with age ranges of 13-17. Typical diagnoses include: suicidal ideation, suicide attempt, homicidal ideation, aggression, self-harm, intermittent explosive disorder, major depressive disorder, bipolar disorder, and disrupted mood dysregulation disorder. All of these admissions receive an OT evaluation within 24 hours. These evaluations are designed to assess how the child manages self-care tasks, sleeping/eating habits, possible chores/pets they might take care of, school environment, home environment, sensory needs, identifying triggers, coping skills, and a goal to work on while they are in the hospital. Once this information is gathered the OT determines a care plan and further assessment needs. The most common assessments used include Allen Cognitive Level Screen (ACLS), the Canadian Occupational Performance Measure (COPM), and the Sensory Processing Measure (SPM). These assessments occur during a 1:1 treatment session, and the results are placed in the child's discharge binder with tips and suggestions for the caregiver to use when managing behaviors. If appropriate, the results are also discussed with the patient to ensure their needs are being met during their stay.

The OT also determines what kinds of supports or sensory needs the patient might need during their inpatient stay. The OT collaborates with staff on the unit to provide information on how to help assist with self-care tasks and sensory preferences. The most common information provided includes needing staff to verbally remind patients to complete ADLs or creating a visual schedule for the patient to use independently. Patients are also assessed for whether they would benefit from using a fidget if it is appropriate for them to have. This ensures the patient is receiving adequate care to be successful during their stay. All patients on the unit are encouraged to attend group sessions led by Ots, however, groups are voluntary. Group activities vary based

on demographics and interests, but the following themes are always addressed: practicing self regulation, utilizing a support system, practicing assertive communication, understanding different perspectives, and improving self-awareness. Typically, groups last from 45-60 minutes and consist of introductions/ice breaker questions, completing an activity, and having a discussion at the end to tie back to the theme of that group.

During the first week the student was expected to observe all sessions and take notes alongside the OT. The capstone student completed all documentation for groups and evaluations and was independent with this by the end of week 3. Starting in week 3 the capstone student was co-leading all evaluations and groups, while still observing evaluation sessions. In week 4 the student was independent with evaluations, writing up all notes, and administering the ACLS. The student was leading at least 1 group independently and co-leading all other groups by the end of week 4. For the remainder of the capstone project the capstone student was independently/co-leading groups depending on activity and nature of the population. The student was independently completing all notes, tests and measures, and evaluations.

Pediatric Inpatient Units

The average length of stay on the pediatric inpatient units also ranges from 2-7 days with age ranges of 3-12. On this unit, in addition to what is asked during the adolescent evaluation, assessment of handwriting and motor skills are addressed. One assessment that is only performed on this unit includes The Movement Assessment Battery for Children – Second Edition (MABC-2) to assess gross motor skills. Group themes that are addressed with this population include: taking turns, listening and waiting patiently, respecting others and their space, expressing and identifying emotions, and exploring sensory regulation.

During the first couple of weeks the capstone student was able to attend groups in the pediatric unit but this was strictly observation only. As confidence increased with time and observation, the student began to conduct groups and evaluations with more independence. The student also completed some evaluations with this population and was able to observe MBAS administration. During weeks 7 and 8 the capstone student worked specifically with the pediatric inpatient units. The capstone student was able to complete all evaluations on this unit independently during these 2 weeks. All groups were co-lead and student engagement depended on behaviors seen in the patients and what activities were being completed.

Residential and Neurobehavioral Units

The residential units consist of 2 adolescent and 1 pediatric area. Patients in this unit typically have longer stays, ranging from 3 to 9 months, and are state-funded. The population includes higher acuity children that typically require more needs than those on the inpatient floors. There are groups and individual treatment sessions that have the same format as inpatient groups. Typical group sessions include focuses on ADLs, IADLs, job readiness, work skills, emotion regulation, and other existing needs. The NBU is reserved for patients with more complex diagnoses such as autism and cerebral palsy. These patients require more assistance with completing ADLs and managing their conditions, therefore they receive more 1 to 1 treatment sessions than other units. While the capstone student did not have any specific weeks dedicated to these units, multiple observations of sessions occurred. The capstone student was able to observe evaluation sessions on the NBU and thrift store operation. The capstone student was also able to lead interoceptive groups on the residential unit.

Therapeutic Crisis Intervention (TCI) Training Program

During week 5 the student completed the Therapeutic Crisis Intervention (TCI) training program. This program is a requirement for all new staff planning to work at the College Hill campus. This training ensures that staff understand how to diffuse situations, implement active/therapeutic listening, and safely complete physical restraints. This was a full 4-day course providing education on how to handle situations that arise in the population seen as College Hill. The training included lectures, role-playing, physical testing including how to restrain patients, and a written test. All staff have to receive an 80% or above on all tests to pass and become certified. All therapists have to complete this training and take a recertification course every 6-months in order to practice at this location. The recertification course includes retaking a written test and practicing physical restraints again.

Interoceptive Binder Implementation

Introduction to TRACK

The TRACK team is composed of 6 occupational therapists who are tasked with projects that aim to advance clinical research and maintain up to date knowledge on interventions, assessments, models, and others. The TRACK team meets weekly on Thursdays to discuss current open projects and to divide work among each member. While the student was on site, the team was working on building the interoceptive program to be utilized in the residential community and finding evidence to support the KAWA model. The student offered input and helped with all outstanding projects. This included finding evidence based articles supporting the use of KAWA model, finding assessments that targeted interoception, and building the weekly modules for the interoceptive programming.

Gathering Assessments

From the literature review the student found 3 assessments that directly target interoception. These assessments were: The Multidimensional Assessment of Interoceptive Awareness (MAIA), The Five Facet Mindfulness Questionnaire (FFMQ), and the Scale of Body Connection (SBC). These assessments were all found to be current and relevant for determining how children/adults understand how their body is feeling and how it relates to their physical symptoms. According to a study completed in 2023, the MAIA was found to be not reliable on many terms and conditions utilized. However, the brief MAIA-2 has a higher-order overall interoceptive awareness index. While there are still some concerns with gender biases, the questionnaire was determined to be both valid and reliable for measuring interoceptive awareness (Rogowska, 2023). The Journal of Psychiatric Research examined the psychometric properties of the FFMQ assessment. The overall analysis of the assessment was determined to be adequate and internal consistency was statistically significant. Overall, the FFMQ was determined to have high reliability and adequate psychometric properties (Gherardi-Donato, 2020). The SBC assessment has limited current research, with one study finding moderate to strong internal consistency reliability and supporting the use of this assessment both in practice and research (Price, 2017).

Discussion with Team

After finding literature to support the above assessments, the capstone student presented the options to the TRACK team. First thing discussed included which assessments were used/implemented in the past to gauge what parts of the assessments were not a good fit for the program. From this conversation, it was determined that the FFMQ and SBC assessments would not be beneficial for the residential program. The FFMQ was determined to be too lengthy for the children to complete. It also had questions that were not worded well and were too

complicated for the children to understand. The SBC assessment was ruled out due to asking some questions related to sexual activity, which were deemed inappropriate for the age and population at the site. From this conversation, the MAIA assessment was determined to be the best fit based on psychometric properties and specific outcomes of the interoceptive training program.

Implementation

After deciding on an assessment, the TRACK team and student looked through the curriculum to determine the best way to incorporate the assessment into the program. It was decided that the best place would be during week 1 after the introduction/icebreaker prior to starting the week 1 lesson: Hands and Feet. This change would be implemented when the next interoception program started. For the existing interoception group the capstone student helped with programming, revising weekly, outlines and co-leading weekly sessions. For sustainability, the TRACK team was provided access to the assessment via a google drive and it is also stored on the site in paper format in the interoceptive binder.

Interoceptive Programming

As mentioned above, part of TRACK was designated towards helping to organize the weekly sessions for the interoceptive programming. The team determined the most important topics for an 8 week program. The final program was as follows: Week 1: Hands and Feet, Week 2: Ears and Voice, Week 3: Mouth and Eyes, Week 4: Heart, Lungs, and Muscles, Week 5: Brain, Week 6: Body Signals as Clues to Emotions, Week 7: Explore Emotions and Specific Body Cues, Week 8: Feel Good Menus. To start off each week, children would receive a list of descriptive words that described how a specific part of the body might feel. The kids used these sheets as a guide to help them describe how their body was feeling during the groups. After each

group the patients were then asked to write down a descriptive word about how their body felt. At the end of each session the patients were then provided homework to complete a body scan utilizing the descriptive menus used during the group. Resources were organized during TRACK and housed in weekly binders. The weekly binders also included a list of materials to ensure that everything needed to complete the sessions was accounted for. See Appendix E for an example of a weekly outline used during the interoceptive group.

Capstone Project Evaluation

Qualitative and quantitative data were utilized for evaluating the effectiveness of the project. These data were also utilized to determine the culture of the clinic and what was already effective for the clinic.

Methods

The method utilized for analyzing effectiveness of the interoceptive binder was a 10 question survey composed of open-ended response and Likert scale questions. Questions addressed: culture of the organization, willingness to accept new ideas, confidence and understanding with using interoceptive interventions/assessments, common outcome measures, and activities with highest priority. Questions utilized in the survey can be found in Appendix D. This survey was constructed during week 1 and emailed out to all therapists, with an emphasis on everything being voluntary. A post-survey was not conducted due to the interoception assessment not being implemented during the capstone rotation.

The method utilized for measuring the capstone student's progress towards advancing clinical skills was through the capstone evaluation in CORE. The site mentor was required to complete a detailed evaluation composed of a 1-4 scale and free response comments at week 7 and week 14. The site mentor then reviewed these responses with the capstone student to

highlight areas of strength and areas that could still use more work. In the open-ended response section of the midterm evaluation the site mentor stated that the capstone student was, "progressing well towards goals, [has] shown great initiative, and [was] a quick learner." For the final evaluation, the student was able to increase or remain consistent on every objective measured. In the open-ended response section the site mentor stated that the student "has definitely made an impact on the patients, thrived despite challenges, and made quick progress towards becoming independent.

Results

In the below tables are the responses from the survey sent out prior to implementation of interoception materials. One limitation to the results includes number of participants; there were not many therapists working in OT departments specific to psychiatry. It should also be noted that the use of these resources are an ongoing project for the TRACK team. Although therapists were educated by the capstone student on how to use assessments, only a couple therapists were actually able to implement them. The assessments were used with the residential group which was run by 1 Ot.

From the results of the pre-survey, all responses indicated that there is a strong need for assessments and interventions that target interoception. From the open-ended response questions, some therapists found that the psychiatry department can be resistant to change, reactionary, and disorganized. Because of this, there were often scheduling conflicts and decreased participation in groups. Overall, the results of the survey indicated that helping the TRACK team organize their interoceptive program would be beneficial for the site.

Table 1

Results from Likert-Scale questions on Pre-Survey

Questions	*Strongly Disagree (Rating=1)*	*Somewhat Disagree (Rating=2)*	*Neither Agree or Disagree (Rating=3)*	*Somewhat Agree (Rating=4)*	*Strongly Agree (Rating=5)*
To what extent are new ideas embraced and used to make improvements in your organization?	0	2	1	1	1
There a strong need for assessments targeting interoception in your facility?	0	0	0	3	2
Interventions targeting interoception are used often in this facility?	0	0	4	1	0
I am confident with my current level of knowledge and understanding of interoception assessments.	0	2	1	2	0
I am confident in implementing interoception assessments that are current and relevant.	0	1	1	3	0

Table 2

Results from Open Ended questions on Pre-Survey

Question	Response
How would you describe the culture or your organization?	• Interactions amongst individuals are generally friendly and positive. Otherwise, I would describe it as disorganized, slow to make changes, and reactive vs proactive. • Supportive • Structured, collaborative, fun • Reactionary • Diverse, passionate, willing to help patients and change the outcome. However, can be resistant to change in how things are done.
Describe the activities that appear to have the highest priority for this facility.	• Movement based activities • Evaluations and groups (focused on engagement and following directions) • Group activities, including crafts, cooking, and games
What current outcome measures are most utilized at this facility?	• ACLS, MABC-2, Sensory Processing Measuring, Sensory Profile, COPM, Comprehensive Assessment of Interoceptive Awareness • ACLS, COPM, FITT documentation, SPM, MABC2 • ACLS, COPM, Sensory Questionnaires • COPM

Sustainability

To ensure sustainability throughout this clinical skills capstone experience multiple steps were taken. A detailed weekly planner was provided for the student, labeling what goals would be addressed each week for the clinical skills component of the capstone experience. The capstone student met with the site mentor at the end of each week to discuss how the week went and what kind of support was needed to move forward. During this meeting, the student and site mentor discussed which of the goals set for that week were met versus not met. Goals that were not met were carried over into the following week. The site mentor was also very conscious of creating space for the student to ask questions after seeing each patient. The site mentor encouraged the student to shadow other therapists on different wings in order to see different types of patients and therapists' viewpoints.

To ensure sustainability of the educational materials component of the capstone project multiple steps were taken. Weekly meetings with the TRACK team were set up to make sure all members were up to date with current literature. The student also kept the site mentor up to date with the progress of the project and set up times to discuss the project with other therapists. In order to ensure sustainability with this project the capstone student met with the TRACK team to discuss overall results and educate the team on findings. During the final meeting the capstone student shared a Google drive folder with the team to ensure access to the MAIA and other materials. The capstone student also created a printed copy to allow for easier access for copying.

Discussion

Interpretation of Results

Based on the literature review, gap analysis, needs assessment, and interview with the site it was determined that there was a gap between desired programming and resources utilized in a pediatric mental health facility. To help address this gap the capstone student worked with the TRACK team to find literature and best practices with evidence-based materials that would be beneficial. The pre-survey sent during week 1 determined that OT practitioners at College Hill did not have a lot of confidence with finding and implementing interoceptive assessments. Through the capstone student's literature review, 3 assessments that could potentially be beneficial for the site to use were identified. Through discussion, the team elected to use the MAIA in the future and to focus on developing weekly interoceptive programming.

Qualitative results from the survey indicated areas of growth needed. Some results from the survey indicated that the psychiatry department can sometimes be resistant to change, have a hard time accepting new ideas, and reactionary. This made it difficult for the therapists to program effectively due to schedules always changing and never having consistency with the amount of patients attending the group. This was another thing that made it difficult to implement standardized assessments due to some patients not completing every week of programming. In order to implement assessments the therapy team will need to determine how to collaborate with psychiatry. Other responses indicated that the department was structured, collaborative, and fun. This made it easier to keep patients in groups once they attended. The therapists and staff were able to keep the patients engaged so they did not attempt to leave groups.

Based on the midterm and final evaluations completed by the site mentor it can be concluded that the student met all of the expectations set during the capstone process. The capstone student met weekly expectations and progressed forward towards being an independent

therapist. The capstone student was able to learn how to be disciplined, develop clinical reasoning skills in a specific population, use creativity and critical thinking when planning groups, and reach a level of independence with evaluations, tests and measures, and group sessions. The capstone student was able to leave an impact on the therapy team by bringing new ideas to the table, offering a different perspective, and locating current evidence-based practices.

Achievement of Goals

The capstone student was able to achieve all goals and objectives set during the capstone experience. Through set expectations and goals listed out weekly the capstone student was able to learn advanced clinical skills in a pediatric mental health setting. By the end of the capstone experience the capstone student was operating at full caseload and able to develop independent clinical reasoning skills. The capstone student was independent with completing evaluations, one on one sessions, and groups. An evidence based binder focused on interoceptive assessments was created in collaboration with the TRACK team for proper implementation on site to be used during the next interoceptive session. The capstone student also helped on other projects related to the KAWA model and interoceptive programming for increased researching skills. The capstone student collaborated with the therapists to create the weekly interoceptive sessions.

Limitations

The capstone experience was only 14 weeks, whereas most new hires are provided 3-6 months of mentorship prior to being independent. If the capstone experience was longer there would have been more opportunities for growth and independence in this particular setting. The remaining limitations are regarding the education aspect of the capstone experience. For this project the student came in with the goal of developing an evidence based binder full of interoceptive assessments. However, most of the assessments the capstone student identified had

already been trialed by therapists at the clinic in the past, limiting the capstone student's ability to provide assessments the site would use, and limiting pre/post assessment on the impact of the binder.

Impact

The capstone experience impacted the student by allowing them to learn and practice skills that will last beyond the 14 week capstone. The capstone student gained an understanding and expectation for what it is like to work in an inpatient pediatric psychiatric hospital. The capstone student was able to learn skills and knowledge that will be transferable to other areas of practice. While at the College Hill campus, the capstone student completed new evaluations, delivered standardized assessments, managed challenging behaviors, implemented a trauma informed care lens, and grew overall problem solving and clinical skills within inpatient pediatric psychiatry. The capstone student was able to develop a safe environment for the kids to open up and participate in group therapy. They were able to develop communication skills, social skills, learn new hobbies, and learn how to cope with their emotions so they can implement these once they leave the hospital. The role of occupational therapy in this setting is crucial towards proper development and care for those struggling with their mental health. They teach kids how to develop coping skills and impulse control that will hopefully lead them towards decreased admissions to the hospital and a better quality of life.

Conclusion

Throughout the 14 week capstone experience the student addressed the gap between implementing evidence based interoceptive assessments alongside the TRACK team while advancing clinical skills in a mental health setting. The resources developed by the capstone student are now housed in the interoception resources folder to be used at the discretion of the

site. Through utilization of the EHP model the capstone student was able to complete the self directed capstone project and maintain the core values and mission statement of CCHMC. Meeting weekly with the site mentor allowed the capstone student to stay on track with goals and build an increased understanding and appreciation of OT's role in mental health. Through operating at full caseload the capstone student was able to effectively learn how to function as a team member and implement successful group sessions, evaluations, and one to one treatment sessions.

Although evidence supports the role of OT in psychiatric hospitals, advocating for the profession in this field continues to be needed. CCHMC OT/PT department accomplishes this through TRACK teams finding literature to support different interventions and education that OT's can offer. The capstone student added to these resources by developing a binder for interoceptive assessments. The hope is to use these assessments on evaluations for the residential program in order to assess what kinds of support the patients might need to help manage their mental health symptoms. The capstone student was able to gain clinical skills and confidence in a pediatric psychiatric setting that will transfer to any setting the student will work in. This 14 week experience equipped the capstone student with the ability to think critically and creatively in order to provide trauma informed care to all patients.

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Appendix A

Interview Questions

1. What does a typical day look like for you in your role as an OT for this clinic?
2. What are some of the services that are available at this clinic?
3. What are the common diagnoses and age ranges at this clinic?
4. Where do the patients go after being discharged from inpatient psych?
5. How would you describe the structural organization of your department?
6. What are some of your biggest successes?
7. What are some of your biggest challenges?
8. Is there a current need that you have already identified within your site?
9. What does discharge at this facility look like?
10. What do you envision the sustainability of my project to look like?

Appendix B

IRB Submission

24522 - Not Human Research Determination

KN

no-reply=kuali.co@mx3.kuali.co on behalf of Kuali Notifications<no-reply@kuali.co>

To: Brown, Katelyn

Fri 9/13/2024 12:32 PM

If you are not responsible for the IU Kuali Protocols submission for this protocol, this is for informational purposes only and no action is required.

NOTICE OF IRB REVIEW NOT REQUIRED

Protocol #: 24522

Protocol Title: Developing an Evidenced Based Binder of Assessments

PI: Wasmuth, Sally

The above submission was reviewed and IU HRPP staff determined the project is not human subjects research and does not require further review.

Please retain a copy of this email in your research records. You will not receive a separate approval letter.

If you have any questions or require further information, please contact the IU HRPP via email at irb@iu.edu or via phone at (317) 274-8289.

Appendix C

Fieldwork Schedule

Week	Goals to Complete
Week 1	Orientation and Training at Base Observe evaluation and treatments. Orient to facility. Complete competency training and readings.
Week 2	Observe groups, 1:1's, tests and measures, and attend rounds.
Week 3	Begin to co-lead groups/evaluations. Observe 1:1's and co-lead tests and measures. Attend rounds.
Week 4 Adolescent	Plan and lead 1 group. Split evaluations depending on number of admissions. Co-lead all 1:1's and tests and measures. Attend rounds.
Week 5 Adolescent	Plan and Lead 2 groups. Split evaluations depending on number of admissions. Lead 2 1:1's with minimal assistance. Lead 1 test and measures with minimal assistance. Attend rounds.
Week 6 Adolescent	Have competency training and readings completed. Plan and Lead 3 groups. Complete all evaluations. Split all 1:1's. Complete all tests and measures with supervision. Attend rounds.
Week 7 Pediatric	Independent in Adolescence. Plan and Lead 1 pediatric group. Co-lead all evaluations, 1:1's, and tests and measures. Attend rounds.
Week 8 Pediatric	Independent in Adolescence. Co-treating with SLP. Plan and Lead 1 pediatric group. Split evaluations, 1:1's, and tests and measures. Attend rounds.
Week 9 Plans daily patient care to cover units	Plan and lead all groups. Complete all evaluations. Complete all 1:1's and tests and measures. Attend rounds.
Week 10 Plans daily patient care to cover units	Plan and lead all groups. Complete all evaluations. Complete all 1:1's and tests and measures. Attend rounds.
Week 11 Plans daily patient care to cover units	Plan and lead all groups. Complete all evaluations. Complete all 1:1's and tests and measures. Attend rounds.

Week 12 Plans daily patient care to cover units	Plan and lead all groups. Complete all evaluations. Complete all 1:1's and tests and measures. Attend rounds.
Week 13 Plans daily patient care to cover units	Plan and lead all groups. Complete all evaluations. Complete all 1:1's and tests and measures. Attend rounds.
Week 14 Plans daily patient care to cover units	Plan and lead all groups. Complete all evaluations. Complete all 1:1's and tests and measures. Attend rounds.

Appendix D

Qualtrics Survey Questionnaire

1. How would you describe the culture of your organization?
2. To what extent are new ideas embraced and used to make improvements in your organization?
3. Is there a strong need for assessments targeting interoception in your facility?
4. How often are interventions targeting interoception in your facility?
5. What is your current level of knowledge with interoception assessments?
6. What is your current level of confidence with implementing interoception assessments?
7. How often are assessments targeting interoception being utilized?
8. What is a strategy you plan on using to incorporate these assessments into your daily practice?
9. Describe the activities that appear to have the highest priority for this facility.
10. What current outcome measures are most utilized at this facility?

Appendix E

Sample Week Interoceptive Group Session

Week 2: Ears and Voice		
Check-In	Descriptor words and emotion check-in	Participants use descriptor words to describe how their ears and voice are feeling. The purpose is to teach patients how to separate description words from emotion words. Participants were also asked to complete an emotion check-in to describe how they are feeling today and if they have any updates they wanted to share with everyone.
Education	What is interoception and what are specific descriptor words	OT engaged participants into a discussion about what interoception is and why it is important. Asked participants to guess what descriptive words could be used to describe ears and voices. Once collaboration was over, OT handed out laminated paper with descriptive word options. Participants used these papers when going through each experiment. Examples of descriptive words for ears: focused, distracted, sensitive, too much, sore, itchy, shut off, full, muffled, or neet quiet. Examples of descriptive words for voice: loud, quiet, fast, slow, shut off, yelling, questioning, high, low, cracking, normal, whispery, repeating, or dry.
Experiments	Hands-on experiments completed.	1. Listen to a repetitive sound for 10 seconds. 2. Close your eyes and guess what direction a person's voice is coming from. 3. Listen to a riddle with cotton balls in your ears. 4. Listen to soft classical music for 30 seconds. 5. Listen to loud rock music for 30 seconds. 6. Lightly trace the outside of your ear with your finger. 7. Rub your fingers and thumbs together right next to your ears for 10 seconds. 8. Pat your ears gently with your palms for 10 seconds. 9. Sit in silence for 15 seconds. 10. Say "hello" to the person next to you without anyone else hearing.

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		11. Say “Sally sells seashells” once, taking as long as you can. 12. Don’t talk for 30 seconds, even if someone asks you a question. 13. Say your full name 3 times in a low-pitched voice. 14. Say your full name 3 times in a high-pitched voice. 15. Ask the same question over and over again for 10 seconds.
Homework	Clear Picture	Participants were sent home with a copy of the descriptive words to use during their clear picture, which is a check-in every patient has to complete each night.