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BOSTON UNIVERSITY

SARGENT COLLEGE OF HEALTH AND REHABILITATION SCIENCES

Doctoral Project

A COGNITIVE BEHAVIORAL APPROACH TO IMPROVING PERFORMANCE AND SATISFACTION IN MEANINGFUL OCCUPATIONS IN THE OUTPATIENT MENTAL HEALTH SETTING

by

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Submitted in partial fulfillment of the

requirements for the degree of

Doctor of Occupational Therapy

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ABSTRACT

Mental health conditions pose a significant risk to an individual's ability to effectively participate in daily occupations such as sleep, caregiving, self-care, leisure, exercise, productivity, socialization, and play. This doctoral project used a retrospective study to demonstrate an effective intervention based on a Cognitive Behavioral of Reference (CB-FoR) to improve performance and satisfaction in meaningful occupations in patients living with a mental health condition in the outpatient occupational therapy clinic setting. Forty-eight medical records of patients aged eight to 78 years old presenting with mental illnesses affecting daily functioning were included in the study. The Canadian Occupational Performance Measure (COPM) was utilized at initial evaluation and reevaluation to measure clinically significant change over time. Treatment data presented in this paper strongly suggests that integrating a cognitive behavioral-based intervention in the outpatient occupational therapy clinic setting leads to positive and clinically significant outcomes, regardless of age, socioeconomic status, or gender.

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CHAPTER ONE – Introduction

According to the National Alliance on Mental Illness (NAMI), prior to the COVID-19 pandemic, the U.S. spent $225 billion in 2019 on mental health treatment and service costs, which is an increase of 52% since 2009 (NAMI, 2023). A 2016 study found that 10-20% of children and adolescents had a mental health problem including attention deficit, cognitive disturbances, decreased motivation, and negative mood which can impact productivity and childhood occupations adversely (Schulte-Korne, 2016). As of 2023, one in 10 youth reported depression and 30% of youth reported experiencing serious psychological distress, with 60% of these youths receiving no mental health services (Mental Health America, 2023; Weber, 2024). There are worse educational outcomes, lower school attendance and test scores, higher dropout rates, and lower labor force entry for youth living with mental illnesses (The White House, 2022).

Approximately one in five adults are experiencing mental illnesses with 55% of these adults not receiving treatment and 23% reporting cost as a barrier, which disproportionately affects people of color and low-income families (Mental Health America, 2023; Sung et al., 2020). It is expected that depression on its own will be a leading cause of disability by 2030 (Blakemore, 2019). Despite these numbers, there is an estimated one mental healthcare provider per 350 individuals in the U.S. (Mental Health America, 2023).

Mental health disorders lead to large economic costs not only for those living with mental illnesses, but for their families and society as well (The White House, 2022). These burdensome costs are expected to rise, and with that rise, there is an expected

increased need for inclusive, efficient mental health services (Sung et al., 2020). The research and statistics clearly present a persistent pattern of increasing mental health service needs and that many adolescents, children, and adults are not receiving adequate treatment to offset negative impacts these can have on meaningful occupations.

Occupational therapists are experts in identifying barriers to participation in meaningful occupations whether that be from a physical disability or a mental illness. They employ action-based and occupation-focused approaches to provide purposeful cognitive, physical, and sensory strategies to improve functional skills. As the need for mental health providers grows, preparing occupational therapists to work in this setting will be paramount to improving mental health services and increasing access to more patients. The World Federation of Occupational Therapists (WFOT) defines occupational justice as the right to participate in occupations, choose occupations, and freely engage in occupations (Hocking et al., 2019). Occupational therapists are obligated to address this right and promote participation in functional skills needed for wellness.

Mental health issues can persist across the lifespan and across environments, devastating participation in valued occupations, and resulting in loss of productivity, physical health, and mental wellness. Cognitive dysfunction, including executive functioning impairment, can adversely affect occupational productivity and daily functioning in meaningful activities of daily living (ADLs) and instrumental activities of daily living (IADLs) such as sleep, education, work, home management, community management, health management, caregiving, leisure pursuit, self-care, school, and socialization. Occupational therapy plays a significant role in the improvement of daily

functioning and recovery from mental illnesses across populations throughout the lifespan.

The American Occupational Therapy Association (AOTA) has called for action in mental health within the occupational therapy arena, yet minimal progress has been made in mental health provision despite the need, which have been commonly cited as unmet in the rehabilitation setting, though falling directly in occupational therapy's scope (Gutman & Raphael-Greenfield, 2014; Wheeler et al., 2022). Successful engagement in occupation that leads to achievement of health and well-being, describes the primary domain and process of occupational therapy (AOTA, 2020). The Occupational Therapy Practice Framework (OTPF-4) includes mental functions such as executive functioning skills, metacognition, judgement, concept formation, and cognitive flexibility along with emotional regulation, appropriateness, and lability among the scope of the occupational therapist to treat (AOTA, 2020). Global mental functions including psychosocial, temperament, personality, energy, and sleep functions also lie within the client factors domain of occupational therapy (AOTA, 2020). External (environmental) and internal (personal) factors influence our occupational performance. Cognitive processes fall under the body functions realm within client factors, demonstrating occupational therapy's place in improving cognitive performance and mental wellness that affect overall functioning (AOTA, 2020).

A 2021 pandemic era study found that meaning in activities is a positive outcome of human health and well-being when mental illnesses prevail (Cruyt et al). Occupational therapists are critical mental health resources due to their ability to assess and treat the

whole person, but are an underutilized service (D'Amico et al., 2018). Only 3.18% of occupational therapy practitioners work in mental health settings (AOTA, 2023). This muted presence underscores the decreased knowledge and awareness of how occupational therapists can support occupation, fewer fieldwork opportunities, limited research in occupational therapy processes, reduced services for individuals living with mental illnesses, and less professional preparation in the outpatient mental health setting (Phadsri et al., 2021; Bazyk et al., 2018).

Occupational therapy's roots are in mental health, yet students and practitioners state feeling unprepared to work in these settings, with low confidence in their abilities to effectively treat individuals living with mental illnesses (Gee et al., 2022). A sentiment of lacking knowledge of effective strategies, verbiage, and goal writing skills that would fulfill insurance reimbursement criteria in mental health practice areas of occupational therapy exacerbates implementation of mental health services across settings (Pisegna, 2022). The divergence away from mental health contributes to decreased public and healthcare professionals' awareness regarding occupational therapy's scope of practice with a reluctance by providers to refer (Marfia, 2021). Deficient research on billing practices, patient satisfaction, adherence, duration of sessions, outcome studies, and efficacy of occupational therapy services in the outpatient mental health setting contribute to misconceptions of occupational therapy's scope and limited implementation of evidence-based models (Gee et al., 2022). Lack of use of evidence-based interventions in this setting may contribute to poor outcomes for individuals living with mental illness affecting functional skills. Further, occupational therapy practitioners continue to be

unrecognized as Qualified Mental Healthcare Providers (QMHPs) in several U.S. states (D'Amico et al., 2018; Wilburn et al., 2021). With a projected 10,000 mental health care providers needed to support the growing mental health crisis, occupational therapy practitioners are needed to help fill this service gap but there is a shortage of professionals trained to deliver mental health and, more specifically in reference to this paper, evidence-based cognitive behavioral interventions (Wilburn et al., 2021; Eakman et al., 2022).

The inclusion of cognitive behavioral interventions into treatment sessions is a logical progression of occupational therapy's role when the cognitive scope and evidence-based focus of occupational therapy are considered (Murphy et al., 2018). Although CBT strategies can be implemented by an occupational therapy practitioner due to their training in psychological and cognitive interventions, this is not widely recognized by providers, the public, and other health professionals (Hildebrand et al., 2022). CBT can be defined as an evidence-based psychological approach to self-management that helps individuals improve psychological and physical functioning and prevent disability. Education, practice, and monitoring of health behaviors, with a focus on physical activity, relaxation, and activity pacing are important facets of CBT (Murphy et al., 2018). Concepts of CBT also include stress management and problem solving, which are combined with cognitive restructuring and accuracy in situation assessment (Hildebrand et al., 2022). CBT aims to teach effective coping strategies to alleviate unhelpful cognitions, which in turn supports participation in valued occupations (Behavior Institute, 2023).

Incorporation of evidence-based practices, such as CBT, in combination with the use of valid and reliable assessments that measure clinically significant changes in occupational performance over time, demonstrates to reimbursement and referring entities that occupational therapy treatment is soundly grounded in science and promotes positive recovery from mental illnesses. The Canadian Occupational Performance Measure (COPM) is one type of occupational performance measure that allows occupational therapists to differentiate their specific skill set by measuring deficits related to performance and satisfaction in daily occupations. Goal writing can also be guided by deficits discovered through use of the COPM and research indicates that the COPM is effective in the evaluation of clients' self-perceived limitations in activity participation, well-being, and quality of life (Thyer et al., 2018). However, there are other effective occupational performance assessments that would also be appropriate in this setting, based on the therapist's clinical judgement. The COPM was chosen for use in this study due it's validity and reliability, its ability to assess change over time, and because it can be used as a guide for intervention and goal development (Law et al., 2019).

Summary

When health and wellness are compromised by contextual barriers and problems in bodily functions and structures, the ability to partake in necessary and meaningful occupations across life situations can be negatively impacted (AOTA, 2020). Positive mental health is supported when we participate in occupations that over time have developed importance and meaning. Occupational therapy's role in mental health is to

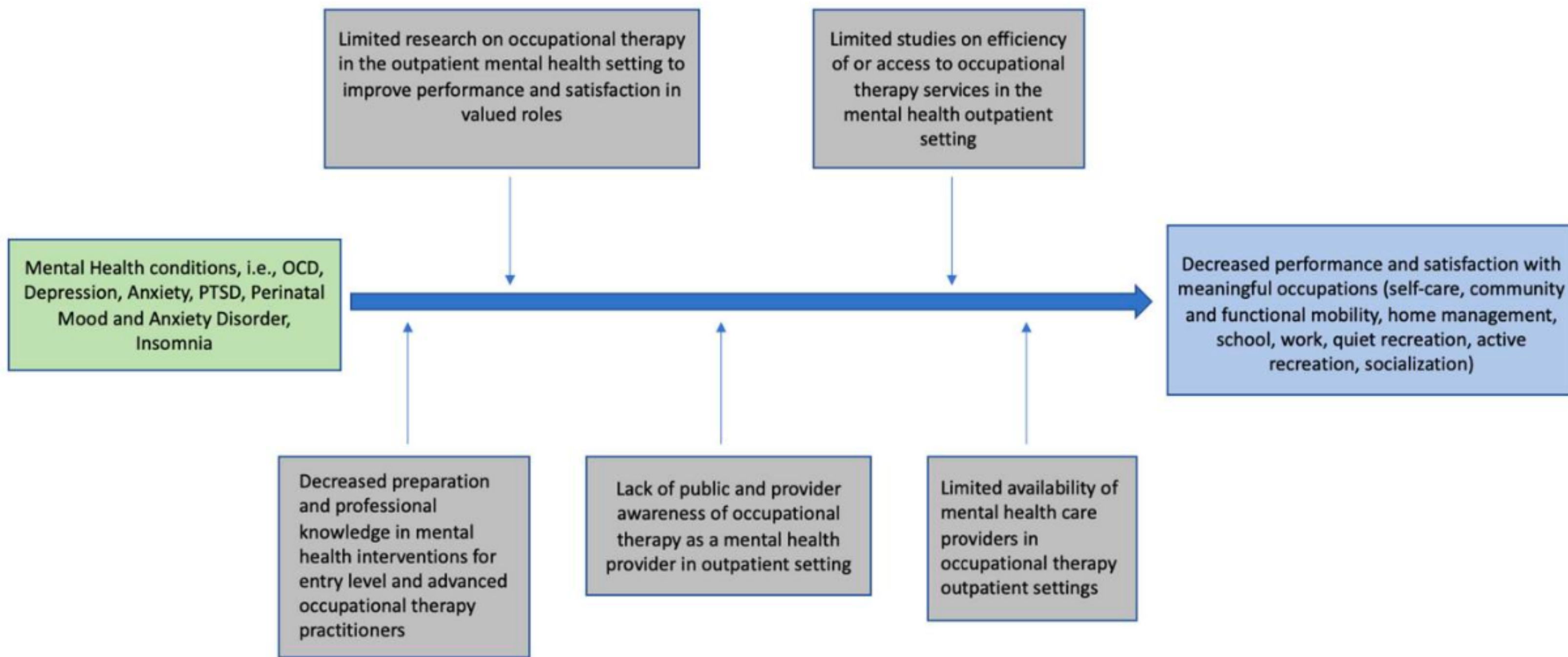
enable patients to find meaning and purpose in valued roles, participate in meaningful occupations, and foster learning and growth while living with a mental health condition. Occupational therapists can be successful implementing cognitive behavioral-based mental health programming in the outpatient clinic setting to address the needs of individuals living with mental illnesses affecting functioning by proving efficacy of treatment through monitoring and assessment, educating providers and other communities of interest, providing training for occupational therapy practitioners and students on specifics needed for implementation and new service line development, and by publishing research on the integration of cognitive behavioral strategies into the outpatient setting.

CHAPTER TWO – Project Theoretical and Evidence Base

The national shortage of mental health care providers has been exacerbated by the Covid-19 pandemic, resulting in further restrictions in access to services that promote improved participation in valued roles and routines for individuals living with mental illnesses (Nissen et al., 2022). There are many reasons access continues to be limited from an occupational therapy perspective. Poor public and provider awareness of occupational therapy's role in the outpatient mental health setting and low confidence in implementing interventions in this setting by occupational therapists, results in less treatment for this population. Individuals living with mental health conditions cannot receive much needed mental health services if they are constrained by low provider referral volume and unclear understanding of occupational therapy's role on the mental health team (Poleshuk, 2021). In addition, limited research exists on efficiency of occupational therapy interventions, including cognitive-behavioral interventions, in the outpatient occupational therapy mental health setting. These barriers and issues coalesce as antagonists to providing quality, positive services to those living with a mental health condition that adversely affects their participation in meaningful occupations. Figure 2.1 depicts the unidirectional relationship between the moderator variable (mental health conditions) and the outcome variable (decreased performance and satisfaction with meaningful occupations) of the problem with five key factors, or mediators, contributing to the outcome variable.

Figure 2.1

Explanatory Model of the Problem (Jones, 2024)



Less than 4% of occupational therapists work in a mental health setting, which is less than a one percent increase over the past five years (AOTA, 2023). This leads to less opportunities for educating future practitioners in this area of practice. According to Wilburn et al. in a 2021 health perspective article, only eight U.S. states unambiguously authorize occupational therapists to be recognized as qualified mental healthcare providers (QMHPs). Five other states and Puerto Rico have included language or other requirements to include occupational therapists as mental healthcare providers. Gee et al. (2022) speaks to the possible productivity expectations and electronic health care documentation records not set up to support documentation, billing, and practice in the outpatient mental health setting, but in this author's experience, none of these concerns have come to fruition. This conversation highlights the need for accurate and readily available information on billing, documentation, and interventions in this setting for ease and confidence of incorporation. Documentation, evaluation, and billing with a patient in the mental health setting shares the same basic tenants as goal development, interventions, and treatment diagnoses for other more traditional areas of occupational therapy such as pediatrics or outpatient ortho. This is demonstrated by the fact that private insurance as well as Medicare and Medicaid/Medical include these cognitive codes in their language as reimbursable and the OTPF-4 includes language to support work in this realm. The misunderstanding of realities of structure and process to support occupational therapists' treatment in the outpatient occupational therapy setting discourages incorporation of mental health interventions across practice settings.

The Cognitive Behavioral Frame of Reference (CB-FoR) guides treatment

through the merging of cognitive behavioral and action-based approaches with the foundational principles of occupational therapy which includes client-centered, occupation-focused practice grounded in evidence-based concepts (Duncan, 2020; AOTA, 2022). CBT concepts were incorporated into occupational therapy based on the premise that it is the responsibility of the occupational therapist to assist their clients in the use of adaptive behaviors to enable engagement in activities in an effective, evidence-based manner (Duncan, 2020). For instance, a meta-analysis by Ikiugu et al. (2017) concluded that behavioral or cognitive behavioral frameworks may improve occupational performance and wellness in clients living with a mental health disorder in the occupational therapy setting. Occupational therapy shares similar components and values to CBT, such as methods of assessment, realistic and collaborative goal setting, positive and actionable treatments, and flexibility to cater to individual clients (Duncan, 2020). These concepts ease the application and incorporation of cognitive behavioral approaches into traditional occupational therapy interventions across practice environments.

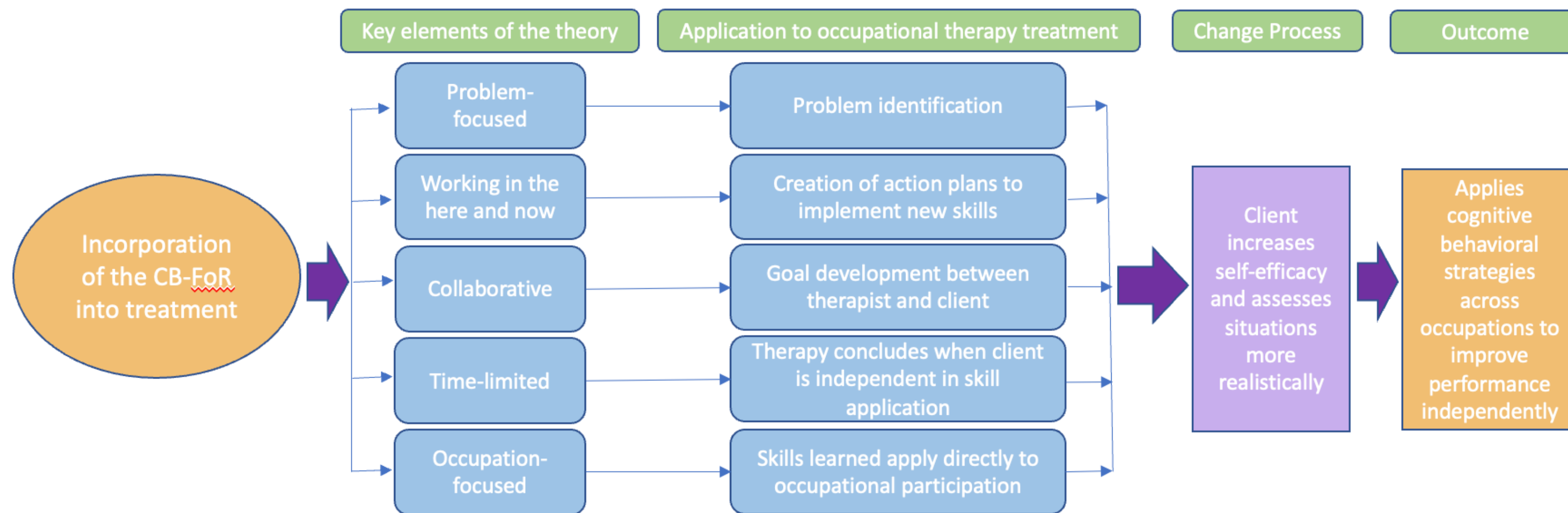
Key elements of the CB-FoR include being problem-focused, working in the present, and being collaborative, time-limited, and occupation-focused. These elements can be applied in treatment through occupational performance problem identification via an occupational performance measure, action plans to promote skill carry-over outside of treatment sessions, collaborative goal setting related to client-identified problem areas and tapering of session frequency with client progression and maintenance of developed skills. Treatment focuses on occupational and cognitive adaptation with the client demonstrating independence in skill application at discharge. Change is a process

wherein the client learns cognitive behavioral strategies to challenge core beliefs of self, utilize adaptive strategies, assess situations more accurately, develop a more realistic sense of self, and increase self-efficacy. Independent application of these strategies across occupations and contexts promotes improved performance and satisfaction in valued roles and routines. Concepts of the CB-FoR theory from Duncan (2020) are visually mapped in Figure 2.2.

The literature revealed a strong evidence-base for mental health issues adversely affecting occupational performance, including the areas of sleep, productivity, caregiving, employment, socialization, occupational skill development, functional independence, community engagement, and successful community participation (D'Amico et al., 2018; Read et al., 2018; Wheeler et al., 2022; Eakman et al., 2022; Knight & Baune, 2018; Hees et al., 2012; Graham, 2020; Merryman et al., 2017; Phadsri et al., 2021; Pisegna, 2022). A health policy perspective discussed the importance of occupational therapy interventions in managing aggression, bullying, and rejection in children and youth to improve success in education, and work participation in adults who are living with a mental health condition (Wilburn et al., 2021). A study by Nissen et al. (2022) illuminates the financial impacts decreased participation in occupation due to mental illness has on an individual such as loss of income, development of persistent comorbidities, and hospitalizations. Few studies were found that directly addressed occupational therapy services in the outpatient clinic setting to improve participation in valued occupations for those living with a mental health condition. D'Amico et al. (2018), Juckett et al. (2022), and Gee et al. (2022) described persistent gaps in research

Figure 2.2

Visual Map of Key Elements in the Causal Pathway of the CB-FoR (Jones, 2024)



on occupation-based outcome measures, including the COPM, and outcome studies specific to activities of daily living (ADLs), instrumental activities of daily living (IADLs), leisure, rest, and sleep which exacerbate misunderstanding of occupational therapy's place in mental health settings, including outpatient settings. The emerging practice areas of occupational therapy including outpatient behavioral health, pediatric mental health, and perinatal mental health continue to lack research to guide practice in these settings (Hutchinson et al. 2019; Handojo et al., 2017; Graham, 2020).

Research revealed poor recognition and acceptance of the need for occupational therapists by other healthcare professionals, that occupational therapists lack awareness of their own professional preparation and contribution to the mental health team, minimal research on guiding frameworks, and that the public are not cognizant of occupational therapy's role and qualifications in the mental health setting were reported in other studies (Hutchinson et al., 2019; Graham, 2020; Poleshuk, 2021; Nissen et al., 2022). Another study found that occupational therapists rarely focus on social emotional factors, further exacerbating misperceptions of occupational therapy's role and scope in relation to mental health (Marfia, 2021). With few occupational therapy practitioners working in mental health settings, rarer opportunities to participate in mental health level II fieldworks follow suit, compounding feelings of being unprepared to incorporate mental health interventions into practice by occupational therapists (Gee et al., 2022; Bazyk et al., 2018; Marfia, 2021). Though mental health education and professional knowledge is a major part of an occupational therapist's training, and educators believe students are prepared to embark on employment in mental health settings upon graduation,

occupational therapy practitioners and students have reported confusion on their role in the mental health setting (Nissen et al., 2022; Poleshuk, 2021).

Studies focusing on clinically significant occupational performance changes, ideal lengths of interventions, efficiency of mental health interventions, and long-term studies of sustained performance following conclusion of interventions were negligible (Gee et al., 2022; D'Amico et al., 2018). Other studies revealed discrepancies between empirical evidence, established guideline adherence, and clinical practice, suggesting deficiencies in science-driven and evidence-based practice regarding assessments and processes in the occupational therapy mental health setting (Pisegna, 2022; Juckett et al., 2021; Hutchinson et al., 2019). The need for innovative research demonstrating effectiveness, acceptability, and cost and time efficiency of occupational therapy mental health interventions to increase financial feasibility and accessibility of services were an inherent theme (Juckett et al., 2021; Gutman & Raphael-Greenfield, 2014).

Summary

Mental health conditions are an ongoing challenge for the health system and society in general, with significant losses experienced in the areas of occupational performance. The need to address the barriers and limitations involved in occupational therapy treatment or lack thereof in the outpatient mental health setting is pressing, as the need for mental health services continues to increase. Appropriate evidence-based interventions, assessments, reimbursement practices, processes, and frameworks for the practicing occupational therapist exist, but guidance and research on implementation remain elusive, ultimately contributing to less services for those in need.

CHAPTER THREE – Overview of Current Approaches and Methods

In general, low quality of studies, wide arrays of implemented interventions and measures, limited conclusions of intervention efficacy, and insufficient evidence of effectiveness of occupational therapy interventions for youth and adults living with mental illnesses affecting daily life were revealed through research (Brooks et al., 2021; Birken et al., 2022; Fox et al. 2019; Kirsh et al., 2019). However, emerging to strong evidence to support cognitive behavioral interventions for mental illness or insomnia depending on setting, demographic, and diagnosis were revealed (Wheeler et al., 2022; Handojo et al., 2017; Read et al., 2019; D'Amico et al., 2018; Fox et al., 2019; Eakman et al., 2022). Interventions in the mental health setting outside of cognitive behavioral approaches included the Restoring Effective Sleep Tranquility (REST) protocol for insomnia, the Balancing Everyday Life (BEL) intervention for improved lifestyle changes, the Proactive Community Occupational Therapy Service for Social Participation Development (PCOTS-D) intervention for social participation, and the Kia Piki te Hauora: Uplifting our Health and Wellbeing intervention on preventing mental illness symptoms (Eakman et al., 2022; Lund et al., 2020; Phadsri et al., 2021; Tokolahi et al., 2018). Occupational therapy interventions based on the theoretical frameworks of behavioral/cognitive behavioral, the model of human occupation (MOHO), the Canadian Model of Occupational Performance and Engagement (CMOP-E), psychodynamic, cognitive, and occupational adaptation, improved occupational performance in those living with a mental health disorder (Graham, 2020; Ikiugu et al., 2017).

A variety of educational approaches to increase awareness of occupational

therapy's role in mental health settings included advocacy, knowledge interventions, informational posters, opinion papers, statements, and research. These educational approaches articulated to internal and external audiences occupational therapy's role in mental health services, created programming to educate faculty, communicated the importance of non-traditional fieldwork placements, and explored and reported on the perceived absence of need for or acceptance of occupational therapists in the mental health space (Burson et al., 2017; Poleshuk, 2021; Fanelli, 2022; Henderson et al., 2015; Hutchinson et al., 2019). The American Occupational Therapy Association (AOTA) has pledged to increase the number of mental health providers to meet the growing demand through public education, continuing education for occupational therapy providers, and through their visionary statement and pillars on how occupational therapy can support national initiatives (Gibbs et al., 2022). The White House proposed to improve the mental health system infrastructure and address provider burn out, workforce shortages, research needs, and scholarships and loan repayment for mental health providers working in underserved areas (The White House, 2022). Marfia (2021) developed an evidence-based framework for her dissertation that supports and increases occupational therapy providers' confidence to provide effective mental health interventions to children.

Summary

Current methodologies to address the need for increased occupational therapy presence in the mental health setting are many, but quality of research varies. Mental health settings where treatments are administered by occupational therapists range from

community-based to inpatient. Attempts to increase education for the public and other healthcare providers of occupational therapy's role in mental settings spanned grass roots movements to official statements and published research. Occupational therapists are beginning to venture more into non-traditional settings, including mental health, but this has been a slow-moving trend. The shift toward a more mental health-focused profession by the AOTA and other influential entities will help to mobilize occupational therapists and occupational therapy instructors. Some researchers are responding to the issue of limited literature on efficiency of occupational therapy services to increase the profession's transparency and proof of effectiveness in the mental health setting. These efforts demonstrate that although progress is being made in the arena of mental health, occupational therapists and researchers alike must continue their efforts in promoting the importance of occupational therapy in the outpatient and other mental health settings.

CHAPTER FOUR – Research Study Overview

Basis of the Retrospective Study

The aim of this study was to demonstrate effective, efficient, financially sustainable, and positive solutions for recovery from mental illness-related functional impairments. This study evaluated the impact of evidence-based and theory-informed approaches in the outpatient occupational therapy setting to improve not only the quality of life of those directly receiving intervention, but also those indirectly affected by clinically significant improvement in daily life of the patients. A short course of therapy led to the patient's ability to improve functioning in self-identified meaningful occupations across environments.

Several communities of interest were involved and affected by the results of this cognitive behavioral-based intervention. Micro level communities of interest included the indirectly affected rural community and family members where the hospital clinic was located and the directly affected patients receiving treatment. The community and family members may have indirectly experienced the positive results of those who did receive intervention. This population included coworkers, family members, friends, and community dwelling individuals that patients receiving care interact with on a regular basis. The directly affected community of interest, the patients, experienced improved self-regulation skills leading to increased success in meaningful activities.

Meso-level communities of interest were involved in the occupational therapy clinic, interventions, and research. Hospital administration approval was needed to establish the new cognitive behavioral-based service line within the hospital's

occupational therapy outpatient services. Ethical and HIPPA compliant procedures in research were guided and approved by the hospital compliance officer and institutional review board (IRB) personnel. Referring providers were and continue to be key players in the ability of the occupational therapist to serve the population with this effective intervention. Collaborators in the continuum of care for patients included dietary, case management, psychology, psychiatry, and the perinatal task force community advocacy group.

Future macro level communities of interest could include professional organizations and policy makers. The American Occupational Therapy Association (AOTA), the California Occupational Therapy Association (COTA), and the American Psychological Association (APA) could be involved in determining dissemination design to create more impact and serve more people living with mental illnesses. Based on this new research, the Accreditation Council for Occupational Therapy Education (ACOTE), the AOTA, and other professional occupational therapy association boards may decide to investigate the process required to update and change the current occupational therapy mental health curriculum.

Research Study Resources

Participants were not included in the study, only collection of patient records post-treatment with identifiers removed. Data collection included completed first and second administrations of the COPM by individuals aged eight to 78 years old by both gender-assigned at birth females and males living with a mental health condition affecting functional skills. HIPPA compliance was achieved by collecting only that

information needed for the study including number of visits, age, and gender to ensure confidentiality due to the rural location. Only COPMs that had a completed first and second administration were included, and data were collected by a single occupational therapist over a four-year period in an outpatient clinic setting.

According to Giancola (2020), the first stage in utilize-focused evaluation occurs before the reporting phase by establishing trust with communities of interest. This was accomplished through community education to inform the public of occupational therapy mental health servicing in relation to mental health. The occupational therapist presented at provider meetings on the goals, implications, and expected outcomes of interventions to promote referrals for mental health programming. PowerPoints and emails were used to reinforce learning and to relay important referral information including appropriate patient referrals, types of interventions that can be expected in treatment sessions, expected duration and frequency of sessions, and strategies to measure success. Sustainability projections of programming and compliance were achieved through collaboration with hospital administration before implementation of the mental health service line.

Interventions and Activities

Treatment session structure was divided into three main components, occurred one time per week for 30-60 minutes, and averaged nine visits between first and second administrations of the COPM. The beginning of sessions included mood check-ins via a mood inventory or self-report and agenda setting. The middle of sessions included executive functioning skill development (self-regulation, planning, organization,

attention, working memory), exercise home programming, work and volunteerism attainment, home and community management, healthy eating strategies, social skills development, self-care, sleep hygiene, leisure exploration, and use of CBT tools (Beck & Beck, 2018). Interventions such as crafts, jewelry making, art, and emotion-based games were used to improve self-esteem and to encourage participation in pleasurable activities for children and teens were also included during the middle of the session. Sessions concluded with collaborative action plan development to promote carry-over of skills and to support individual goals through planned activity participation between sessions. Table 4.1 describes specific CBT tools; table 4.2 describes therapeutic exercise, therapeutic activity, self-care, and cognitive interventions; and table 4.3 describes the sequential structure of sessions.

Table 4.1

CBT Tools

CBT examples
• Relaxation skills • Daily journaling • Desensitization/exposure • Activity scheduling • Cognitive worksheets • Mindfulness training • Behavior rehearsal • Socratic questioning • Cognitive restructuring • Social skills training • Psychoeducation • De-catastrophizing • Mental imagery • Cognitive rehearsal • Action plans

Table 4.2

Interventions Based on Current Procedural Terminology (CPT) Codes Including Therapeutic Activity, Therapeutic Exercise, Self-care, and/or Cognitive Function

Examples of interventions
• Baby massage • Medication management • Sleep hygiene • Healthy lifestyle change • Yoga/exercise • Leisure pursuit • Arts and crafts • Job or volunteering • Home/community management • Emotion-based games • Organizational strategies

Table 4.3

Structure of Occupational Therapy Sessions Adapted from the Beck Institute (Beck & Beck, 2018)

Session structure elements
• Mood check-in • Review of past week • Agenda setting • Intervention using examples from tables 4.1 and 4.2 • Develop action plan for upcoming week • Elicit feedback

Services were provided and data collected by the author, an occupational therapist. Only one qualified occupational therapist, the author, was available for treatment and study development due to the rural location of the study. Due to the

financial constraints of a critical access hospital setting, other hospital staff were unavailable to assist in data collection and analyzation. Sessions were conducted in person on a one-to-one ratio therapist to patient.

Outcomes

Short term outcomes included development and completion of weekly action plans, demonstrating the patient's commitment to making changes to improving their success and participation in meaningful occupations. Learning of adaptive cognitive strategies to challenge core unhelpful beliefs of self were ongoing throughout treatment. Behavioral tasks, such as collaborating on small experiments the patient could do to provide evidence against automatic unhelpful thoughts were used during this time frame (for example, shopping independently at the grocery store to dispel fear of being judged negatively by the public).

Intermediate outcomes included increased independence with use of adaptive strategies to improve participation in meaningful activities, increased accuracy in situation assessment, and increased self-efficacy. As the patient demonstrated the ability to maintain progress between sessions, sessions were tapered, with the goal of the patient becoming their own therapist by the end of treatment. Core beliefs of self became more realistic and situation assessments more automatic. Long term outcomes revealed clinically significant improvement in Performance and Satisfaction in meaningful occupations as evidenced by an improved score of at least two points for each overall in areas identified at initial evaluation as Important (Law et al. 2019).

These data and results represent a positive shift in daily functioning that is realized by the individual examination of the meaning of these results. Some patients now complete community tasks without fear of or experiencing panic attacks. Some patients have achieved healthier eating and exercise habits through successful changes to routines. Improved time management strategies, organization, attention, and communication with peers, family, and coworkers were conquered by others. Effective child and self-care, bonding with babies, and cognitive strategies to overcome overwhelming thought processes were incorporated into routines for patients living with perinatal mental and anxiety disorders (PMADs). Children learned to control their emotions when transitioning between tasks or places and to sleep in their own beds without fear. Patients living with insomnia were able to go to and stay asleep through the night, with less to no sleeping aids after successful incorporation of cognitive strategies. Other patients took on volunteer work, returned to work, or acquired employment by using cognitive strategies to reduce feelings of overwhelm. Cognitive restructuring and learned self-advocacy led to increased self-esteem and independent management of unhelpful thoughts, allowing adolescents and youth to participate in enjoyable activities like socialization and art. Improvement in day-to-day functioning following this effective and brief intervention occurred regardless of population, amount of goal areas, or diagnosis. These optimistic findings have encouraged providers to confidently refer their patients to occupational therapy to improve participation in meaningful activities, leading not only to more patients being served, but also to increased referrals and revenue for the hospital.

Barriers and Challenges

Initial challenges included persuasion of the rehabilitation director and hospital of the value of mental health treatment services within the occupational therapy clinic by providing estimates of increased referrals to the department and expected increases in revenue. The author worked with psychology and providers at the hospital to learn more about how many of their patients they estimated would be appropriate for referral to the department. Researching billable codes provided reimbursement information to ensure the sustainability of the proposal to start the service line. Due to limited information on documentation for these interventions in this setting, this researcher had to learn what language would distinguish the profession via the Occupational Therapy Practice Framework: Domain and Process, Fourth Edition (OTPF-4) and integrate this into documentation and assessment practices.

Another hurdle early on was defending the new service line to other disciplines such as community psychologists and dietary, who questioned occupational therapy’s scope of practice in mental health servicing. This was overcome through education (i.e. PowerPoint presentations and scholarly articles) and positive outcomes. AOTA has several posters on occupational therapy's role in mental health and other areas of question, such as general health and wellness, that were emailed for their reference.

Through education and persistence, referrals to the rehabilitation department now come from some of those same professionals who questioned occupational therapy’s scope. Mental health referrals now make up ~80% of this practitioner’s patient caseload, with about three to six new evaluations scheduled weekly. Through the process of

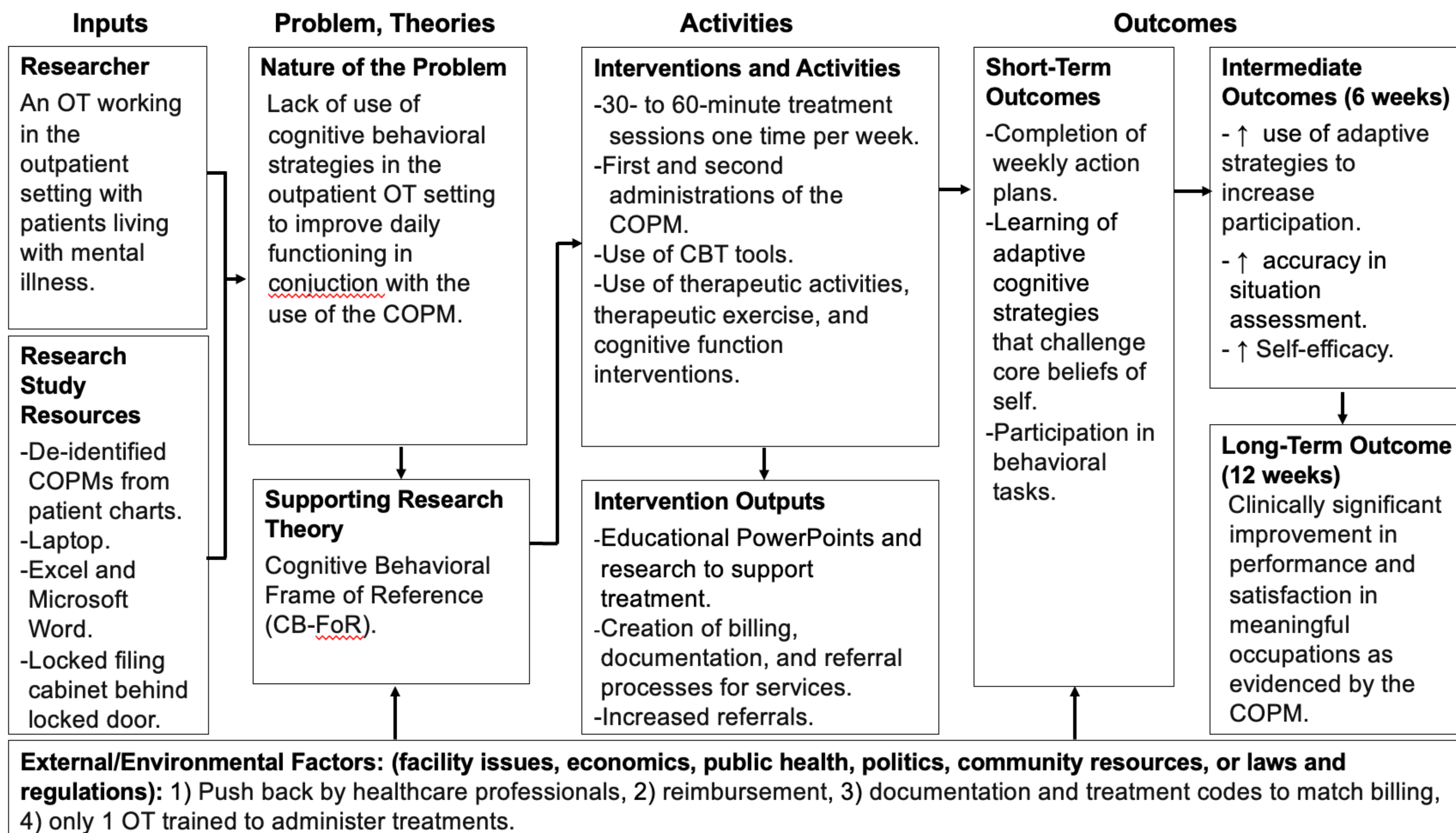
intervention and treatment, improved workflows were accomplished to streamline services to ensure best practice within the boundaries of fiscal resources. Figure 4.1 summarizes the research study components and process in a logic that includes occupational therapy program inputs, problems/theories, activities/outputs, and outcomes.

Summary

This research has demonstrated a constructive, effective, and sustainable approach to recovery from mental illness that transcends age, gender, or socio-economic status, thus improving inequalities to mental health care (Cook et al., 2017). Adoption and incorporation of this approach into outpatient occupational therapy settings could be an integral part of mental health treatment across environments and settings, based on the promising findings presented in this paper. This initial, but auspicious study provides evidence that integrating a cognitive behavioral approach into the treatment of individuals living with a mental health condition can lead to considerable positive clinical and functional outcomes.

Figure 4.1

Logic Model



CHAPTER FIVE – Research Method and Results

Program scenario and communities of interest

Important implications of this preliminary study include the use of cognitive behavioral strategies within the scope of occupational therapy to meet the growing demand for mental health services. The study provides a detailed description of the implementation of this intervention within a rehabilitation department in an outpatient clinic setting. This research strongly suggests that the combination of a cognitive behavioral approach into occupational therapy services results in clinically significant, positive change over time for those living with a mental health condition. Users of these research findings could include the American Occupational Therapy Association (AOTA) and state OT associations, mental health advocacy groups, educational institutions, rehabilitation departments, policy makers, the Accreditation Council for Occupational Therapy Education (ACOTE), occupational therapy students and educators, and occupational therapy practitioners. It is this author's hope that this paper is the beginning of a fundamental change in how society and the occupational therapy profession approach and treat cognitive dysfunction impacting health and wellness, and where all occupational therapists are trained to utilize this effective intervention to empower their clients and themselves.

Engagement of Communities of Interest

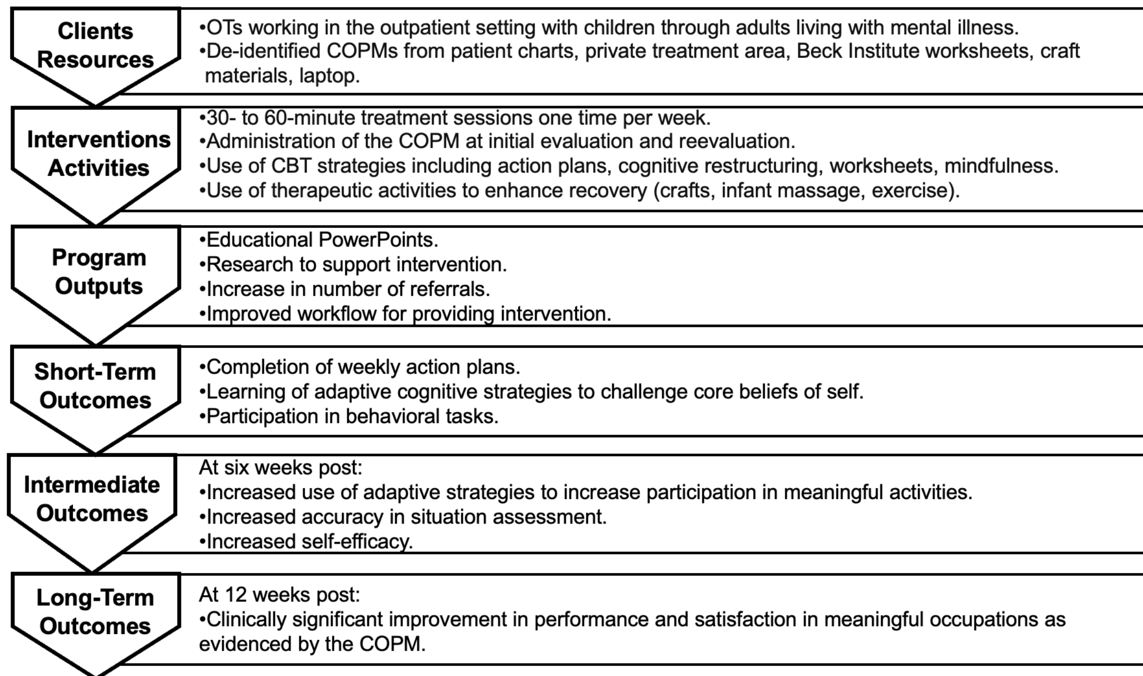
It is critical to engage occupational therapy communities of interest and educational institutions in new evidence-based approaches that demonstrate promising

results in improving recovery from mental illnesses. The research must be disseminated to the greater communities of interest, such as regional and national occupational therapy associations, mental health advocacy groups, law makers, occupational therapy practitioners, occupational therapy students and educators, and occupational therapy curriculum development groups for change to occur. Occupational therapy is moving in exciting directions, and the profession is poised to become included as important mental health providers at this pivotal time of need.

Engaging referring providers, clinics, and rehabilitation departments through education is paramount. Publishing research to reach across disciplines and the occupational therapy profession could lead to widespread adoption of this effective intervention into outpatient clinics. Positive results relayed to law makers could lead to changes in policy affecting availability of occupational therapy mental health services. Published research also provides an opportunity to create change within the profession itself by presenting findings to occupational therapy associations and educational entities who serve to advocate for and steer the direction of the profession. Figure 5.1 represents a simplified modeling of the retrospective study.

Figure 5.1

Simplified Logic Model of the Retrospective Study on Cognitive Behavioral-based Interventions in the Outpatient Clinic Setting



Preliminary exploration and confirmatory process

The people and groups directly affected by the service provision (the author/researcher, patients and their families, community members), as well as other interested parties not connected with the outpatient occupational therapy clinic setting where research took place (providers, professional associations, occupational therapy students and educators, policy makers, IRB, the researcher's university of attendance), were key communities of interest in this study. Table 5.1 describes the involvement, roles, and interests of solitary or group communities of interest.

Table 5.1

Matrix of Community of Interest Information

Community of interest	Type of Involvement (Planning (P), Implementing (I), Reflecting (R))	Role(s)	Specific Interests
The researcher	P, I, R	Overseeing and coordinating logistics, administrating interventions, data collection.	Successful implementation, usable data.
Community and surrounding area, referring providers, hospital, rehabilitation department	I, R	Attending future sessions based on evidence-based treatment access, refer appropriate participants, supporting study.	Successful implementation, satisfaction, improvement in daily functioning, increase in referrals and revenue.
IRB, educational institution of study	P, R	Consultation on methodology, editing, and review of research findings and plans.	Design rigor and robust outcomes, publication of findings.
ACOTE, mental health advocacy groups, AOTA, CAOTA, policymakers, occupational therapy students and instructors	R	Consultation on possible dissemination of findings to the wider profession, enhancement of mental health education in OT school, advocacy for coverage of services, policy changes to support recovery from mental illness.	Research quality stands up to scrutiny and can be used to inform policymaking, mental health curriculum changes, increased awareness of occupational therapy’s role in recovery from mental illness.

Program Evaluation Research Questions by Community of Interest

Table 5.2 describes formative and summative research questions for communities of interest involved in programming. The purpose of these questions is to more explicitly state community of interest types, involvement, roles, and interests. These stakeholder components demonstrate the narrow and wide breadth of the implications of the study.

Table 5.2

Formative and Summative Community of Interest Research Questions

Community of interest	Types of Program Evaluation Research Questions
The researcher	o Did the interventions improve cognitive functioning for meaningful task completion? o Was the duration and frequency of the intervention adequate?
Community of Bishop and surrounding area, referring providers, hospital, rehabilitation department	o Were the interventions useful to improve recovery from mental illness? o Does the use of a cognitive behavioral approach in occupational therapy treatment in the rehabilitation department increase mental health services for our community? o Is treatment reimbursable by private insurance, Medicare, and Medi-Cal/Medicaid? o Has this intervention increased patient caseload of the therapist? o Has this intervention increased referrals to the rehabilitation department? o Did patients gain skills to improve daily functioning? o Did patients increase self-efficacy because of learned skills? o Did patients meet their individual goals? o Can the research data be used to demonstrate improved quality of care provided to recipients of the intervention?

IRB, educational institution of study	○ Did the research design follow the plan as outlined in the IRB application? ○ Did the study align with goals? ○ Were there any problems or issues with aspects of the research project? ○ Will the research demonstrate improvement in recovery from mental illness as expected in the proposal? ○ Did the researcher report on findings as planned? ○ How do these findings compare to other occupational therapy mental health interventions?
ACOTE, mental health advocacy groups, AOTA, CAOTA, policymakers, occupational therapy students and instructors	○ Does this demonstrate the importance of the inclusion of occupational therapy services as part of the mental health team? ○ Could this data be transferred to other states and other populations as a positive and reimbursable treatment to improve functioning in those living with mental illness? ○ Will the research data demonstrate the importance of occupational therapy's role in the outpatient mental health setting? ○ Does this research demonstrate a cost-effective and beneficial way to improve productivity and participation in daily activities in people living with mental illness?

Research Design

This study was a quantitative, non-experimental summative research design. It examined the relationship between cognitive behavioral-based interventions and improvement in performance and satisfaction in meaningful daily activities for those living with mental illness affecting occupations. The summative approach to the research consisted of the collection of pre- and post-scores on the COPM. These numbers then allowed for numerical data analysis.

Method

This retrospective study used aggregated de-identified clinical data collected by a single occupational therapist, the author, over a four-year period in an outpatient clinic setting, who had also administered the measures. Benefits and reasons for use of a retrospective study are reduced cost (the rural hospital was unable to participate financially due to limited funding of operations), did not require the direct participation of any patient or staff member (aside from the researcher who completed analysis on a voluntary basis), it allowed for a larger sample that was readily available, and could be performed immediately because the data exists prior to the start of the study (Science Direct, 2023). The study proposal was reviewed and approved by the Boston University IRB. Measures included in the study were those that had at least a first and second administration, as described in the procedure section below.

Procedure

The COPM was used to measure changes in perceived performance and satisfaction in occupational areas identified as "Important" by the patient over time. This measure is designed for use an outcome measure administered by an occupational therapist to assess outcomes of the client in the areas of self-care, productivity, and leisure (Law et al., 1990) by way of a semi-structured interview. Table 5.3 describes areas assessed on the COPM.

Table 5.3

COPM Areas of Assessment (Law et al., 1990)

Performance Areas	Examples
Self-care	Personal care: dressing, bathing, healthy eating, sleep Functional mobility: stairs, bed, transfer Community management: transportation, financial transactions, shopping
Productivity	Paid/unpaid work: obtaining/maintaining employment, volunteerism Household management: cleaning, laundry, cooking Play/school: play skills, school performance, homework
Leisure	Quiet recreation: hobbies, crafts, reading, cards Active recreation: sports, outings, travel Socialization: visiting, phone calls, parties, correspondence

The COPM is a criterion-based measure where a two-point improvement on average scores of performance and satisfaction from first to second administration represents clinically significant change (Law et al., 2019). Psychometric properties are described in the literature across populations and environments, including less traditional rehabilitation populations with diagnoses such as attention deficit hyperactivity disorder, schizophrenia, anxiety, depression, and post-traumatic stress disorder (Law et al., 2019). The COPM has been validated against functional, psychological, and social functioning measures and demonstrates substantial consensus of its ability to produce stable results over varying intervals (Law et al., 2019).

Data Analysis

For the few patients who were assessed three times, only their first and second administrations were included for consistency. Patient caregivers were included in evaluation when cognitive levels prevented independent completion of assessment by the patient. Clinical judgment during initial assessment determined the impact mental health conditions had on valued occupations. Referring diagnoses varied depending on whether the therapist was able to educate providers on appropriateness of diagnoses before evaluation and as such, were not included in the statistical analysis to reduce bias. For example, a diagnosis of anxiety does not necessarily indicate a need for occupational therapy therefore cannot be used accurately as a treating diagnosis. Occupational therapy is only indicated if the anxiety is affecting successful participation in occupations. A more appropriate referring diagnosis for a mental health condition would be, for example, executive functioning deficit, which reveals issues with planning, memory, decision making, attention, and self-regulation, and can adversely affect the ability to participate in valued roles and routines.

Data from patient medical records were collected and entered into an excel spreadsheet. The following hypotheses were tested using t-tests at a level of significance, α, of 0.05: 1) The mean of performance assessed at second administration is significantly greater than two points above the mean of performance assessed at first administration and, 2) the mean of satisfaction assessed at second administration is significantly greater than two points above the mean of satisfaction at first administration (Jones, 2024). The alternate hypotheses tested at $\alpha = 0.05$ are: 1) The mean of performance assessed at

second administration is not significantly greater than two points above the mean of performance assessed at first administration and, 2) the mean of satisfaction assessed at second administration is not significantly greater than two points above the mean of satisfaction at first administration (Jones, 2024). The Excel spreadsheet was used to calculate mean, standard deviation, median, maximum, and minimum data points. Paired two-sample t-tests for means of differences greater than two were run for the data as a whole, age-ordered, and gender-ordered at $\alpha = 0.05$. T-tests where run after data were split into two groups (patients over 25 years of age and patients 25 years of age or younger) for performance and satisfaction for first and second administration of the COPM.

Prefrontal cortex maturation is a result of dendritic pruning and myelination that rewires neural pathways until the age of approximately 25 (Arain et al., 2013). Determination of age groups was based on this knowledge. Because executive functioning occurs in the prefrontal cortex, age may influence learning of new cognitive skills. Executive functioning represents a set of supervisory cognitive skills for goal-directed behavior that includes planning, response inhibition, working memory, and attention (Johnson et al., 2009). No literature could be found on differences between female and male responses (gender assigned at birth) to CBT in an occupational therapy setting. However, a 2014 metanalysis by Cuijpers et al. revealed no clinically significant difference in response to CBT or antidepressant medication based on gender. For this paper's research study, males and females (gender assigned at birth) were divided to further investigate if differences in response to cognitive behavior-based occupational

therapy services were evident, which to this researcher's knowledge, has not previously been assessed.

Collected COPMs included patient identified areas of occupational performance rated on a scale from 1-10 where 10 is very important, followed by performance and satisfaction ratings in those areas, which were each rated on a scale from 1-10, where 10 means "extremely well" for performance and "extremely satisfied" for satisfaction. Short- and long-term goal creation completed in collaboration with patients resulted from information gained from COPM administration.

Results

Results presented in this paper include data extracted from the collection and analyzation of the 48 (*n=48)* collected COPM measurements and chart reviews. The results are summarized below in a study by Jones (2024):

> The mean, median, and mode ages were 29, 21, and 16, respectively, with a standard deviation of 18.8. The maximum age was 78 years old and the minimum age was eight years old. There were 13 males (*n=13)* and 35 females *(n=35)* (gender-assigned-at-birth). The coefficients of variations for each test demonstrated high variance. Table 5.4 provides the number of visits between the first and second administrations of the COPM. The mean, median, and mode numbers of visits were each nine. Number of visits ranged from three to 22 from first to second administration. The sample variance was 12.77.

The statistical t-tests revealed that the mean of performance and the mean of satisfaction at second administration were greater than the mean of performance and the mean of satisfaction at first administration by at least two points, demonstrating clinically significant improvement for the full set of data, as shown in table 5.4. The t-tests were repeated for data ordered according to both age- and gender-assigned-at-birth to determine differences in populations. Tables 5.5 and 5.6, respectively, show these results, indicating that differences in the mean scores were at least two for the separated data as well. At $\alpha = 0.05$ the t-tests for these data indicate that the hypotheses were supported. Only a one-tail test was included in the data summary because this researcher was concerned only with a one-directional change with results greater than two points (Jones, 2024).

Table 5.4

Paired Two-sample T-tests for Means Using All Data (Jones, 2024)

	Average Performance COPM		**Average Satisfaction COPM**	
Statistic	**First administration**	**Second administration**	**First administration**	**Second administration**
Mean	3.70	7.12	3.05	7.23
Variance	1.61	1.39	3.06	2.51
Coef. of Var.	0.34	0.17	0.57	0.22
Sample size	48	48	48	48
Deg. of freedom	47		47	
Hypothesized mean difference	2		2	
t statistic	-25.86		-21.18	
P(T<=t) one-tail	~0 or 9.66×10^{-30}		~0 or 5.51×10^{-26}	
t critical	1.68		1.68	

Table 5.5

Paired Two-sample T-tests for Means Using Age-ordered Data (Jones, 2024)

a. Results for patients ≤ 25 years old.

	Average Performance COPM		**Average Satisfaction COPM**	
Statistic	**First administration**	**Second administration**	**First administration**	**Second administration**
Mean	3.89	7.46	3.08	7.62
Variance	1.53	1.49	2.85	2.77
Coef. of Var.	0.32	0.16	0.55	0.22
Sample size	29	29	29	29
Deg. of freedom	28		28	
Hypothesized mean difference	2		2	
t statistic	-19.93		-18.48	
P(T<=t) one-tail	~0 or 2.2×10^{-18}		~0 or 1.60×10^{-17}	
t critical	1.70		1.70	

b. Results for patients > 25 years old.

	Average Performance COPM		**Average Satisfaction COPM**	
Statistic	**First administration**	**Second administration**	**First administration**	**Second administration**
Mean	3.40	6.60	3.00	6.62
Variance	1.66	0.82	3.55	1.61
Coef. of Var.	0.38	0.14	0.63	0.19
Sample size	19	19	19	19
Deg. of freedom	18		18	
Hypothesized mean difference	2		2	
t statistic	-16.45		-11.60	
P(T<=t) one-tail	~0 or 1.4×10^{-12}		~0 or 4.4×10^{-10}	
t critical	1.73		1.73	

Table 5.6

Paired Two-sample T-tests for Means Using Gender-ordered Data (Jones, 2024)

a. Results for female patients (gender-assigned-at-birth).

	Average Performance COPM		**Average Satisfaction COPM**	
Statistic	**First administration**	**Second administration**	**First administration**	**Second administration**
Mean	3.63	7.39	2.88	7.63
Variance	1.25	1.14	2.01	2.18
Coef. of Var.	0.31	0.14	0.49	0.19
Sample size	35	35	35	35
Deg. of freedom	34		34	
Hypothesized mean difference	2		2	
t statistic	-25.34		-23.38	
P(T<=t) one-tail	~0 or 5.84×10^{-24}		~0 or 7.81×10^{-23}	
t critical	1.69		1.69	

b. Results for male patients (gender-assigned-at-birth)

	Average Performance COPM		**Average Satisfaction COPM**	
Statistic	**First administration**	**Second administration**	**First administration**	**Second administration**
Mean	3.85	6.38	3.48	6.14
Variance	2.72	1.39	5.99	1.92
Coef. of Var.	0.43	0.18	0.70	0.23
Sample size	13	13	13	13
Deg. of freedom	12		12	
Hypothesized mean difference	2		2	
t statistic	-11.64		-8.11	
P(T<=t) one-tail	~0 or 3.40×10^{-08}		~0 or 1.64×10^{-06}	
t critical	1.78		1.78	

Summary

Research and results presented in this paper provide evidence of a cognitive behavioral-based approach that may contribute to successful recovery from mental health conditions negatively affecting occupational and functional skills. The potential efficacy of this promising treatment approach did not include a control group to compare this intervention to treatment as usual (TAU) or to compare CBT alone to occupation-based interventions, thereby limiting conclusions of the impact of CBT interventions on clinically significant improvement in occupational performance and satisfaction at this early stage. Further rigorous research is needed to validate and add to the evidence of this encouraging initial explorational study, potentially leading to widespread incorporation and adoption of this approach into the outpatient mental health occupational therapy landscape. Convincing evidence that integrating a CB-FoR into mental health treatment leads to considerable positive clinical outcomes for individuals living with mental illnesses affecting daily life is offered by this study.

CHAPTER SIX – Dissemination Plan

Recently published research by Jones (2024) demonstrates the efficacy of implementing a CB-FoR in the outpatient occupational therapy setting to improve outcomes for individuals living with mental illnesses negatively affecting valued roles and routines. A short course of therapy, on average nine visits, has demonstrated clinically significant improvements in performance and satisfaction following cognitive behavioral-based interventions in 90% of children, teens, and adults. This research demonstrates the ability of occupational therapists to create lasting and positive change in recovery from mental illnesses in the outpatient setting.

Long Term Goal

- Cognitive behavioral-based treatment will be an integral part of outpatient occupational therapy treatment for individuals living with mental illnesses, insomnia, or other lifestyle deficits to improve occupational performance and quality of life.

Short Term Goals

- Increase knowledge for communities of interest on recently published evidence to support integration of the CB-FoR into outpatient mental health occupational therapy treatment.
- Enhance the mental health curriculum for students of occupational therapy to include a focus on evidence-based practice in the outpatient mental health setting.

- Create opportunities to guide implementation of a cognitive behavioral-based service line in the outpatient occupational therapy setting to improve outcomes for individuals living with mental illnesses.

Target Audiences

- Primary: Occupational therapy practitioners

Immediately, occupational therapy practitioners could address the need for expanded quality mental health services. The reimbursement structure already exists and there is now at least one source to learn how to implement this service line in their outpatient clinic setting, as outlined in this paper. As the call to address the mental health crisis continues, made by occupational therapy associations and national entities, occupational therapists can directly influence the mental health landscape to improve the lives of those living with mental illnesses through functional and action-based interventions that lead to an improved quality of life.

- Secondary: American Occupational Therapy Association (AOTA) Commission on Education (COE) coalition

The COE could review new evidence-based approaches and interventions, which this doctoral project and resulting publication offers, to propose changes to the occupational therapy program curriculum. The COE could make recommendations to the AOTA Representative Assembly for consideration as well as promote changes by working closely with the Academic Education (formerly Education) Special Interest Section and the Accreditation Council for Occupational Therapy Education (ACOTE) (AOTA, 2024).

Appealing to the COE to consider changes to the mental health curriculum based on this research could have long reaching effects not only for the education of occupational therapy students, but also as an advocacy partner. The COE could be an important participant in the future direction of occupational therapists' mental health training.

Key Messages

- A CB-FoR should guide an occupational therapist's treatment and assessment in the outpatient occupational therapy setting for individuals living with mental illnesses adversely affecting meaningful occupations, based on recently published research.
- An updated mental health curriculum focusing on cognitive behavioral interventions in the outpatient occupational therapy mental health setting should be considered for occupational therapy students, based on recently published research.

Sources/Messengers

- Primary audience spokesperson: Monica J. Jones, occupational therapist and published researcher.
- Secondary audience spokesperson: Monica J. Jones, occupational therapist and published researcher.

Dissemination Activities

Written Information:

- March 2024: Published research paper-Jones, M. (2024). A cognitive behavioral approach to improving performance and satisfaction in meaningful occupations in the outpatient mental health occupational therapy setting. *Occupational Therapy in Mental Health.* https://doi.org/10.1080/0164212X.2024.2326411
- March 2024: Prepared poster presentation for Inspire AOTA 2025 conference on the CB-FoR.

Electronic Media:

- March 2024, ongoing: Promote research paper publication on the efficacy of implementing a cognitive behavioral-based treatment approach in the outpatient mental health setting to improve occupational performance and satisfaction in individuals living with mental illnesses via website/blog, YouTube channel, and speaker events.
- July 2023, ongoing: Continue to update my website/blog to increase knowledge for interested parties (https://www.theoutpatientmentalhealthot.com).

Person-to-person contact:

- April 2024, ongoing: Seek opportunities to teach courses on topic of research through online continuing education or professional platforms such as accredited course broker entities or LinkedIn Events.
- August 2024, ongoing: Identify in-person and remote opportunities to speak at universities and professional conferences including the following entities: the

American Occupational Therapy Association (AOTA), the California Occupational Therapy Association (COTA), the Psychiatric Rehabilitation Association (PRA), and/or the American Psychological Association (APA).

- August 2024, ongoing: Contact communities of interest (ACOTE, AOTA, COE, professional occupational therapy association boards) to investigate the process required to update and change the mental health curriculum.
- December 11, 2024: Teach course on research topic for occupationaltherapy.com.

Budget

Dissemination costs include fixed and highly variable prices. Some dissemination activities such as teaching a course can result in an income opportunity. Table 6.1 describes these costs and opportunities.

Table 6.1

Dissemination Expenses and Revenue

Item	**Estimated Cost Range**
Wix Light website plan	-$17/month ($204/year)
AOTA Inspire conference poster	-$250
LinkedIn Premium membership	-$29.99/month ($360/year)
Teaching a 1-hour course on occupationaltherapy.com	+$500
Conference attendance costs Hotel Food Travel	Dependent on type of travel, distance traveled, location of conference, and conference type/organization
Total	-$314/year + conference and associated costs

Evaluation

- Examine mental health curriculum changes by ACOTE.
- Track national occupational therapy surveys (such as the State of Rehab webPT or AOTA Workforce annual surveys) to assess increases in occupational therapists working in outpatient mental health.
- Pre/post evaluations for continuing education courses.
- Track analytics of website/blog visits.
- Create and implement a user experience survey to assess usefulness of website/blog (April 2024).

Summary

Occupational therapists are the ideal providers for recovery from mental illnesses due to their ability to assess and treat holistically but lack the confidence and guidance to be successful in delivery of mental health services in the outpatient setting, according to research. The occupational therapy mental health curriculum should include the CB-FoR and processes related to implementation of this framework to improve student confidence in addressing functional issues related to mental health conditions across the broad population. If occupational therapists can demonstrate the importance of cognitive rehabilitation through research, curriculum preparedness, and building presence in outpatient settings, then the value of services can be made more transparent to Medicare/Medicaid and private insurers, policy makers, and the public.

CHAPTER SEVEN – Funding and Reimbursement

Funding for mental health services using a cognitive behavioral approach in the outpatient clinic setting involves understanding billing and coding practices, ensuring appropriate referrals are placed, and appropriate documentation of occupational therapy specific interventions. It is essential that occupational therapists use occupation-focused goals and assessments to distinguish their distinct role in the mental health setting. Dissemination costs of research and information are an important consideration and were examined in Chapter 6. Examples of collaborative goals guided by an occupational performance measure used in this study can be found in table 7.1.

Table 7.1

Examples of Reimbursable Goals Identified in Collaboration with Patients using the COPM (Jones, 2024)

Areas of occupation	Goal examples
Self-Care	Participate in sleep hygiene routine. Add fruits and vegetables to diet daily. Brush teeth 2x/day. Complete morning/evening self-care routine. Drive or use public transportation.
Productivity	Develop time management strategies. Develop organizational strategies. Complete nonpreferred tasks. Complete home management tasks. Participating in volunteer opportunities. Obtaining employment. Improving work attendance. Return to work preparation. Reciprocity with peers in play environment.
Leisure	Participating in socialization with peers. Participating in socialization in group settings. Participating in exercise or other active recreation. Participating in reading, painting, writing, time with family or other quiet recreation.

Utilizing Current Procedural Technology (CPT®) codes that reflect the use of cognitive strategies (codes 97129 and 97130) as stand-alone billing codes or in conjunction with other applicable coding commonly used in the occupational therapy setting such as self-care, therapeutic activity, and therapeutic exercise (codes 97535, 97530, and 97110, respectively) to improve functioning in valued occupations solidifies medical necessity of services to promote appropriate reimbursement from insurance payers. Sustainable and accessible mental health programming can be achieved when accurate reimbursement practices are incorporated into treatment. Table 7.2 describes examples of reimbursement rates with descriptors of coding commonly used in this occupational therapist's current outpatient mental health setting in rural California.

Table 7.2

Commonly Used CPT® Codes in the Outpatient Occupational Therapy Setting (Northern Inyo Hospital District, 2023)

CPT® code	Unit time in minutes	Price per unit
97110 Therapeutic procedure, one or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion, and flexibility	15	$33.14
97530 Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance), each 15 minutes	15	$39.75
97535 Self-care/home management training (e.g., activities of daily living [ADLs] and compensatory training, meal preparation, safety procedures, and instructions in use of assistive technology devices/adaptive equipment), direct one-on-one contact, each 15 minutes	15	$37.23
97129 Therapeutic interventions that focus on cognitive function (e.g., attention, memory, reasoning, problem solving, and/or pragmatic functioning) and compensatory strategies to manage the performance of an activity (e.g.,	15	$24.28

managing time or schedules, initiating, organizing, and sequencing tasks), direct (one-on-one) patient contact; initial 15 minutes		
97130 Each additional 15 minutes (List separately in addition to code for primary procedure.)	15	$23.17

Education of referring providers on appropriate referring diagnoses that accurately align with the services that an occupational therapist can provide in the outpatient setting for an individual living with a mental health condition further demonstrates to insurers and interested parties the scope of treatment. For example, diagnoses such as anxiety, depression, or insomnia describe symptoms, not how these symptoms are affecting daily occupational performance. To qualify for occupational therapy services, the mental health condition must be negatively impacting daily functioning in areas deemed important by the individual. This is a similar concept to that of someone referred to occupational therapy for a physical disability, but who is functioning independently and with perceived success in their environments. Skilled services are only indicated if the mental health or physical disability is negatively impacting daily life. Education on services can be achieved through presentations at provider or community meetings, spending time individually educating when needed (for instance, if a provider has a question regarding a referral), by electronic communication to referring providers, and by participating in community events and opportunities when possible. Figure 7.1 depicts an educational electronic communication template.

Figure 7.1

Email Template for Referring Providers Created in Collaboration with Hospital Social Worker and Compliance Officer

Good morning/afternoon [insert provider (s) name (s)],
Below is a description of cognitive behavioral therapy (CBT) and occupational therapy (OT), appropriate patient referral guidelines, and appropriate referring diagnosis codes:

Cognitive Behavioral Therapy and Occupational Therapy

CBT is an evidence and action-based psychological approach to self-management that teaches people to identify, evaluate, and change dysfunctional patterns of thinking, resulting in mood and behavioral changes. A cognitive behavioral model in the OT setting uses a collaborative and occupation-focused approach to improve performance patterns and skills adversely affected by mental health conditions across the lifespan. The integration of CBT into the OT setting has demonstrated the ability to improve functioning in meaningful occupations such as sleep, diet and exercise, leisure pursuit, socialization, productivity, work, school, and self-care (Jones, 2024).

Sessions are 30-60 minutes 1x/week and usually patients can expect to attend 9-12 sessions, although this varies person to person.

What patients are appropriate for referral:

To qualify for occupational therapy services, the mental health condition must be affecting the individual's ability to carry out daily activities, roles, and routines successfully.

Patients must be stable mentally, either through medication management or by nature of their mental illness. Patients with uncontrolled mental illness, suicidal ideation, or aggression will not benefit from occupational therapy cognitive behavioral programming. Patients cannot be a danger to themselves or others to attend sessions, so referrals from the emergency department or those having an acute mental breakdown/psychotic break would not be appropriate. Referrals should come from the patient's primary care provider.

The following codes support the services that occupational therapy can provide treatment for. If the patient and chart documentation meet one of the diagnoses codes listed below, please refer to occupational therapy for 'Evaluation and treatment'.

<u>Anxiety, mood disorder, depression, bipolar disorder, post-traumatic stress disorder, insomnia, attention deficit disorder, perinatal mood or anxiety disorder or other mental health diagnoses may lead to:</u>

Difficulty with concentrating, planning, organizing, managing time, working memory, metacognition, response inhibition, emotional control, sustained attention, task initiation, and/or mental flexibility and may fall under:

- **R41.844 Frontal lobe and executive function deficit: Cognitive deficit in executive function**
- **R41.840 Attention and concentration deficit: Cognitive deficit in attention or concentration**.

Derealization or depersonalization may fall under:

- **R41.82 Altered mental status, unspecified**

Trembling/shaking/shortness of breath/feelings of choking/chest pain or discomfort/nausea/dizziness/chills or heat sensations/tingling sensations may fall under:

- **R44.9 Unspecified general sensations and perceptions or R20.8 Disturbance of Skin Sensation**

A significant maladaptive change in behavior related to panic attacks (e.g., behaviors designed to avoid having panic attacks, such as avoidance of exercise or unfamiliar situations), obsessive thoughts of harm to self or baby, or difficulty with self-care and daily activity functioning may fall:

- **R41.844 Frontal lobe and executive function deficit: Cognitive deficit in executive function**

Additional codes that relate to mental health or other functional issues associated with difficulty completing daily occupations/routines, such as insomnia, developmental cognitive processing issues, or poor pain management may fall under:

- **F89 Unspecified Disorders of Psychological Development (pediatric patients only)**
- **R53.83 Other fatigue**
- **R52 Pain unspecified**

Warm regards,
[therapist name and credentials]

Continued advocacy is needed for widespread integration of cognitive behavioral approaches into the outpatient occupational therapy practice setting by addressing the myths and realities regarding policies, billing, and documentation processes. For example, the reimbursable cognitive codes (97129 and 97130) introduced in 2018 allow occupational therapists to bill for cognitive interventions, such as self-regulation or other executive functioning deficits affecting performance in occupations, but this is not widely

understood by the occupational therapy community (Gee et al., 2022). Further, The Mental Health Parity Act legislation sought to clarify that mental health services delivered by occupational therapists are an allowed and reimbursable service under the Medicare ruling, but this remains an unrecognized benefit (Parsons, 2023). Occupational therapists know how to write measurable goals and have tools to guide the process but need confidence to implement these into mental health treatment settings. Staying abreast of policy changes are key, as more states engage with including occupational therapists as mental health practitioners in their language and as policy continues to alter the reimbursement and funding landscape.

The projected annual costs associated with dissemination of information gained from research and this doctoral project include in-person, written, and electronic forms of dissemination. The total dissemination cost is presented in table 7.3 and discussed in detail in the following chapter.

Table 7.3

Dissemination Cost Overview

Total Annual Dissemination Cost Estimate	-$314/year + conference and associated costs

Summary

The goal of this chapter is to inform a practicing occupational therapist on how to implement a sustainable, cognitive behavioral-based outpatient mental health service line. Occupational therapists have an important and distinguished role in recovery from mental

illnesses, but the lack of information on specific processes and reimbursement needed to implement this type of service creates a barrier. It is hoped that this chapter reduces barriers and stands as a guide for mental health programming in the outpatient occupational therapy setting.

CHAPTER EIGHT – Conclusion

This research study has demonstrated that the implementation of cognitive behavioral strategies into occupational therapy practice in the outpatient setting can produce clinically significant change in perceived performance and satisfaction over time for individuals living with mental illness. Variability was reduced by at least half between first and second administrations of the COPM, across each paired t-test, which implies that the methodology used in sessions led to this phenomenon. This demonstrates more closely self-reported scores for performance and satisfaction in the second administration compared to first administration, meaning that records showed a wide range of self-reported numbers pre-treatment and more closely clustered numbers post-treatment. For the 10% of patients that did not demonstrate clinically significant change, some reported higher scores at first administration, leaving less room for improvement while others demonstrated clinically significant change by the third administration. Had third administrations been included in the study, the percentage of patients reporting numbers representing clinically significant change would likely have been higher than 90%.

Individually examined results reveal successful implementation of cognitive behavioral strategies into daily life across domains. Improved quality of life can be achieved through successful participation in valued occupations. Individual goal attainment was realized by the large majority of patients who received a short course of cognitive behavioral-based occupational therapy increasing independence and accomplishment in basic life skills, roles, and routines. Positive functional gains were

revealed regardless of gender, age, or sociodemographic.

Dissemination of this intervention into the greater occupational therapy profession will require the effort of occupational therapists themselves to gain competency in cognitive behavioral therapy and by implementing new outpatient mental health service lines. For study replication, occupational therapists will need to assess change via the COPM over a period of time in a similar setting with similar patient demographics. Through publication of this research, occupational therapist practice, and advocacy for updating the mental health curriculum, it is the hope that this effective intervention will become integrated into the outpatient mental health occupational therapy setting.

In any research, variability is a reality, and occupational therapists themselves can be a variable. Consistency in intervention was achieved by the study being completed and treatment provided by one individual occupational therapist. Only one percent of the total five to eight percent in outcome variability can be related to variance alone, with the remaining variance percentage due to client factors, therapeutic rapport, and other exchanges (King, 2017). Outcomes from intervention may vary because of this consideration.

Limitations to the generalizability of this study include patient demographics, limited referral diagnoses, and the ability to educate referring providers. Reimbursement fears whether founded or unfounded further limit implementation of this intervention in treatment. Limitations in self-report measures such as the COPM, include the possibility of clients not providing truthful responses due to social acceptance concerns, poor clarity of questions that lead to misinterpretation, and the possibility of the client responding

certain ways regardless of the question (Demetriou et al., 2015). Future research should include a larger male as-assigned-at-birth population and populations over the age of 65 or under the age of 13.

Review of the literature found a wide range of approaches to treating mental health in the outpatient occupational therapy mental health setting, but none describe the effectiveness of using a cognitive behavioral approach to improve success with valued roles and routines. This study strongly suggests a cognitive behavioral approach in this setting for those living with a mental health condition creates positive, clinically significant change over time. This study is meant to inform the occupational therapy profession of an effective treatment approach and provide a blueprint for treatment implementation.

Widespread integration of a cognitive behavioral approach into the outpatient occupational therapy practice setting requires that the myths and realities regarding policies, billing, and documentation processes be accurately addressed. It also requires skill and confidence building of occupational therapists in the outpatient mental health clinic setting and measurement to prove efficacy through use of occupational assessments. Staying abreast of policy changes and continued advocacy for mental health curriculum changes based on most up-to-date evidence-based practice for occupational therapy students is vital. The information gained from this study needs to be readily available to practicing occupational therapists by way written, electronic, and in person communication. Occupational therapy offers a unique lens where quality of life is improved through cognitive strategies that focus on improving participation in valued

occupations, and this should continue to be communicated to the public and interested parties.

Research presented in this paper offers an effective and reimbursable avenue to recovery from mental illness for those living with a mental health condition across age, gender, and socio-economic categories, improving inequalities to mental health care (Cook et al., 2017). Adoption and integration of this approach into outpatient occupational therapy settings could contribute to increased support for mental health treatment. This study provides initial and important evidence that integrating a cognitive behavioral approach into the outpatient occupational therapy setting leads to positive recovery from mental health conditions.

APPENDIX A – Executive Summary

Introduction

According to the National Alliance on Mental Illness (NAMI), the U.S. spent $225 billion in 2019 on mental health treatment and service costs, which is an increase of 52% since 2009 (NAMI, 2023). As of 2023, one in 10 youth reported depression and 30% of youth reported experiencing serious psychological distress, with 60% of these youths receiving no mental health services (Mental Health America, 2023; Weber, 2024). Approximately one in five adults are experiencing mental illnesses with 55% of these adults not receiving treatment and 23% reporting cost as a barrier, which disproportionately affects people of color and low-income families, who are also more likely to develop mental illnesses (Mental Health America, 2023; Sung et al., 2020).

Mental health issues can persist across the lifespan and across environments, devastating participation in valued occupations, and resulting in loss of productivity, physical health, and mental wellness. Cognitive dysfunction can adversely affect productivity and daily functioning in meaningful occupations including sleep, work, home management, community management, health management, caregiving, leisure pursuit, self-care, school, exercise, and socialization. Occupational therapy plays a significant role in the improvement of daily functioning and recovery from mental illnesses across populations throughout the lifespan.

Occupational therapy practitioners are experts in identifying barriers to participation in meaningful occupations whether that be from a physical disability or a mental illness. They employ action-based and occupation-focused approaches to provide

purposeful cognitive, physical, and sensory strategies to improve functional skills. As the need for mental healthcare providers grows, preparing occupational therapy practitioners to work in this setting will be paramount to improving mental health services and increasing access to more patients. The World Federation of Occupational Therapists (WFOT) defines occupational justice as the right to participate in occupations, choose occupations, and freely engage in occupations (Hocking et al., 2019). Occupational therapy practitioners are obligated to address this right and promote participation in daily roles and routines needed for wellness.

Project Overview

This doctoral project used a retrospective study to demonstrate an effective intervention based on a Cognitive Behavioral Frame of Reference (CB-FoR) to improve performance and satisfaction in meaningful occupations in patients living with a mental health condition in the outpatient occupational therapy clinic setting. Forty-eight medical records of patients aged eight to 78 years old presenting with mental illnesses affecting daily functioning were included in the study. The COPM was utilized at initial evaluation and reevaluation to measure clinically significant change over time.

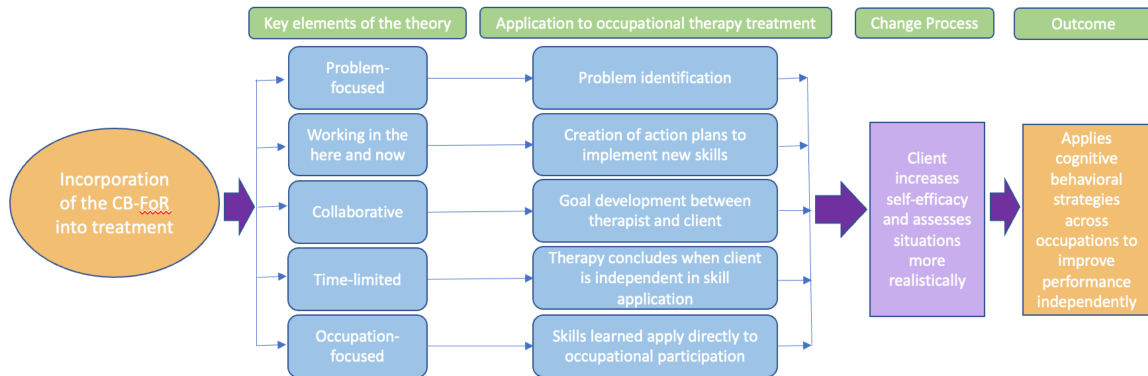
Theory and Evidence

Cognitive Behavioral Frame of Reference (CB-FoR)

The CB-FoR guides treatment through the merging of cognitive behavioral and action-based approaches with the foundational principles of occupational therapy which includes client-centered, occupation-focused practice grounded in evidence-based concepts (Duncan, 2020; AOTA, 2022). Cognitive Behavioral Therapy (CBT) concepts

were incorporated into occupational therapy based on the premise that it is the responsibility of the occupational therapy practitioner to assist their clients in the use of adaptive behaviors to enable engagement in activities in an effective, evidence-based manner (Duncan, 2020).

Key elements of the CB-FoR include being problem-focused, working in the present, and being collaborative, time-limited, and occupation-focused. These elements can be applied in treatment through occupational performance problem identification via an occupational performance measure, actionable plans to promote skill carry-over outside of treatment sessions, collaborative goal setting related to client-identified problem areas and tapering of session frequency with client progression and maintenance of developed skills. Treatment focuses on occupational and cognitive adaptation with the client demonstrating independence in skill application at discharge. Change is a process wherein the client learns cognitive behavioral strategies to challenge core beliefs of self, utilize adaptive strategies, assess situations more accurately, develop a more realistic sense of self, and increase self-efficacy. Independent application of these strategies across occupations and contexts promotes improved performance and satisfaction in valued roles and routines. Concepts of the CB-FoR theory from Duncan (2020) are visually mapped below.



Literature Review

Less than 4% of occupational therapists work in a mental health setting, which is less than a one percent increase over the past five years (AOTA, 2023). This leads to less opportunities for educating future practitioners in this area of practice and less opportunities for individuals living with mental illnesses to receive the mental healthcare they need. The literature revealed a strong evidence-base for mental health issues adversely affecting occupational performance, including the areas of sleep, productivity, caregiving, employment, socialization, occupational skill development, functional independence, community engagement, and successful community participation (D'Amico et al., 2018; Read et al., 2018; Wheeler et al., 2022; Eakman et al., 2022; Knight & Baune, 2018; Hees et al., 2012; Graham, 2020; Merryman et al., 2017; Phadsri et al., 2021; Pisegna, 2022). Few studies were found that directly addressed occupational therapy services in the outpatient clinic setting to improve participation in valued occupations for those living with a mental health condition. Research revealed poor recognition and acceptance of the need for occupational therapy practitioners by other healthcare professionals, that occupational therapists lack awareness of their own

professional preparation and contribution to the mental health team, minimal research on guiding frameworks, and that the public are not cognizant of occupational therapy's role and qualifications in the mental health setting (Hutchinson et al., 2019; Graham, 2020; Poleshuk, 2021; Nissen et al., 2022). Studies focusing on clinically significant occupational performance changes, ideal lengths of interventions, efficiency of mental health interventions, and long-term studies of sustained performance following conclusion of interventions in the mental health occupational therapy setting were negligible (Gee et al., 2022; D'Amico et al., 2018).

In general, research revealed low quality of studies, wide arrays of implemented interventions and measures, limited conclusions of intervention efficacy, and insufficient evidence of effectiveness of occupational therapy interventions for youth and adults living with mental illnesses affecting daily life (Brooks et al., 2021; Birken et al., 2022; Fox et al. 2019; Kirsh et al., 2019). However, emerging to strong evidence to support cognitive behavioral interventions for mental illness or insomnia depending on setting, demographic, and diagnosis were revealed (Wheeler et al., 2022; Handojo et al., 2017; Read et al., 2019; D'Amico et al., 2018; Fox et al., 2019; Eakman et al., 2022). A variety of educational approaches to increase awareness of occupational therapy's role in mental settings included advocacy, knowledge interventions, informational posters, opinion papers, statements, and research. Occupational therapy practitioners and researchers alike must continue their efforts in promoting the importance of occupational therapy in the outpatient and other mental health settings through publishing research and proving efficacy in treatment.

Recommendations

Cognitive behavioral-based treatment should be considered as an integral part of outpatient occupational therapy treatment for individuals living with mental illnesses, insomnia, or other lifestyle deficits to improve occupational performance and quality of life. Continued efforts to increase knowledge for communities of interest on recently published evidence to support integration of the CB-FoR into outpatient mental health occupational therapy treatment is paramount to this goal. To increase knowledge for occupational therapy students, the mental health curriculum should be enhanced to include a focus on evidence-based practice in the outpatient mental health setting. To increase the knowledge for occupational therapy practitioners, who can immediately begin influencing the mental health landscape, opportunities to guide implementation of a cognitive behavioral-based service line in the outpatient occupational therapy setting to improve outcomes for individuals living with mental illnesses should be created. Learning and inclusion of best practice based on current research can occur through several arenas including synchronous and asynchronous remote platforms, in-person presentations, and other written materials. Support for this change will be needed by entities including the American Occupational Therapy Association (AOTA), the AOTA Commission on Education (COE), and the coalition the Accreditation Council for Occupational Therapy Education (ACOTE).

Conclusions

Occupational therapy practitioners are the ideal providers for recovery from mental illnesses due to their ability to assess and treat holistically and should therefore be widely utilized as mental healthcare providers in promoting recovery from mental illness. Research presented in this paper strongly suggests that integrating a cognitive behavioral-based intervention in the outpatient occupational therapy clinic setting leads to positive and clinically significant outcomes, regardless of age, socioeconomic status, or gender. A CB-FoR should guide an occupational therapist's treatment and assessment in the outpatient occupational therapy setting for individuals living with mental illnesses adversely affecting meaningful occupations, based on recently published research. An updated mental health curriculum focusing on cognitive behavioral interventions in the outpatient occupational therapy mental health setting should be considered for occupational therapy students. The coalescence of research and practice provides an opportunity to serve more people, improving quality of life and successful recovery from mental illnesses in the outpatient occupational therapy setting.

APPENDIX B – Fact Sheet

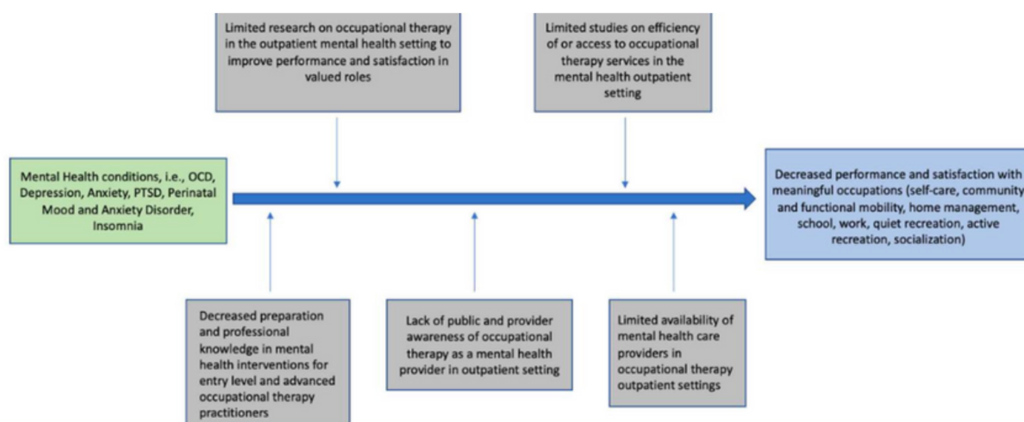
A Cognitive Behavioral Approach to Improving Performance and Satisfaction in Meaningful Occupations in the Outpatient Mental Health Occupational Therapy Setting

Monica Jones, MS OTR/L, PMH-C

Introduction

- Mental illness affects 21% of adults in the United States, with over half of parents expressing concerns about their children's mental well-being (Mental Health America, 2023; The White House, 2022).
- The annual cost of mental illness in the United States is approximately $193.2 billion, often resulting in repeated hospitalizations, income loss, and lifelong comorbidities due to inadequate treatment (Nissen et al., 2022).
- Individuals with mental health conditions may struggle with successful participation in meaningful occupations such as sleep, self-care, work, exercise, leisure, productivity, and socialization.
- Occupational therapy plays a key role in enhancing daily functioning adversely affected by mental illness and could help alleviate strain on the healthcare system but is underutilized (D'Amico et al., 2018).

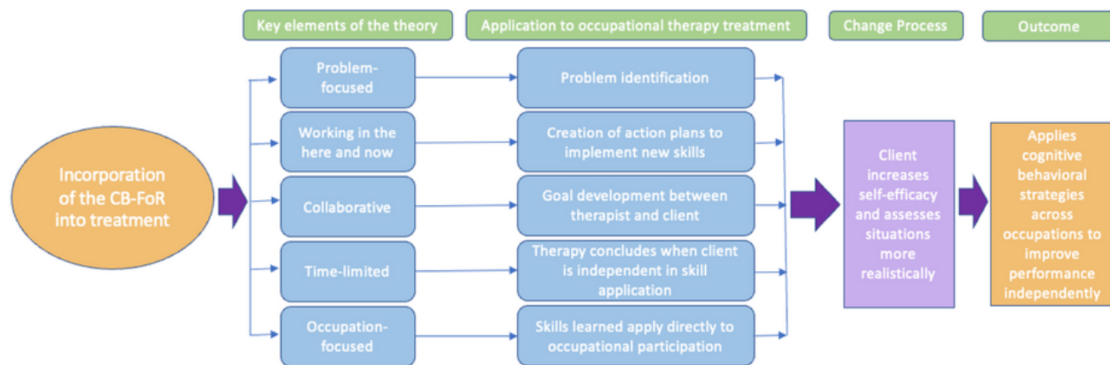
Visual mapping of the problem



Introduction to the doctoral research project

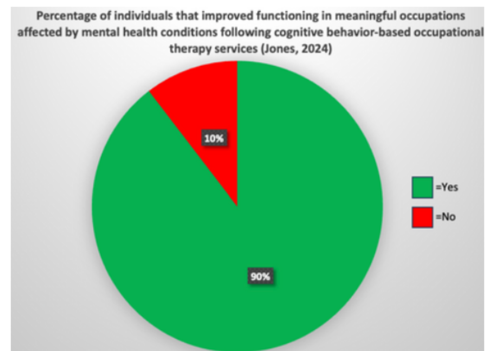
- A retrospective study was completed to demonstrate an effective intervention based on a cognitive behavioral frame of reference (CB-FoR) to improve performance and satisfaction in meaningful occupations in patients living with a mental illnesses in the outpatient occupational therapy clinic setting.
- Forty-eight medical records of patients aged eight to 78 years old presenting with mental illnesses affecting daily functioning were included in the study.
- The Canadian Occupational Performance Measure (COPM) was utilized at initial evaluation and reevaluation to measure clinically significant change over time.
- Therapy took place over the course of nine sessions on average and was supported financially by standard billing and documentation practices.

Visual mapping of the CB-FoR



Results and Implications

- Research strongly suggests that integrating a cognitive behavioral-based intervention in the outpatient occupational therapy clinic setting leads to positive and clinically significant outcomes, regardless of age, socioeconomic status, or gender.
- Integration of this approach into outpatient occupational therapy settings could increase support for individuals living with mental illnesses.
- This study is meant to inform the occupational therapy profession of an effective treatment approach and provide a blueprint for treatment implementation.



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