

Received 1:30  
April 25, 2014

EVIDENCE-BASED PRACTICE IN RECREATIONAL AND OCCUPATIONAL THERAPY

by

Erin Shae Whitman

A Senior Honors Project Presented to the

Honors College

East Carolina University

In Partial Fulfillment of the

Requirements for

Graduation with Honors

by

Erin Shae Whitman

Greenville, NC

May 2014

Approved by:

Faculty Mentor (signature required):

A large, empty rectangular box with a red border, intended for the signature of the faculty mentor.

Susan McGhee PhD, LRT/CTRS

The purpose of this project is to determine if Recreational and Occupational Therapy interventions are backed by sufficient research, or not, and if evidence-based interventions are effective. Through combining Honor's College and Recreational Therapy internship requirements this paper explores pre-existing research regarding Recreational and Occupational Therapy interventions and their effectiveness with the Dual Diagnosis population. During the internship process, the author was able to assess a hospital agency on the use of evidence-based interventions. Then, using a case study with a current patient, was able to test the effectiveness of treatment using evidence-based interventions. Throughout this paper, the author will introduce the role of Recreational and Occupational Therapy in the Behavioral Health setting, the push for more evidence-based research in these two fields, current research as well as the process and results of the case study and make recommendations based on the findings.

Recreational Therapy (RT) is a relatively new profession to the healthcare field, beginning the credentialing process in 1956. ("NCTRC - National Council for Therapeutic Recreation Certification," n.d.) According to the American Therapeutic Recreation Association, "Recreational therapists utilize a wide range of activity and community based interventions and techniques to improve the physical, cognitive, emotional, social, and leisure needs of their clients. Recreational therapists assist clients to develop skills, knowledge, and behaviors for daily living and community involvement. The therapist works with the client and their family to incorporate specific interests and community resources into therapy to achieve optimal outcomes that transfer to their real life situation." ("FAQ About RT/TR," n.d.) In the behavioral health

setting, RT primarily focuses on cognitive, emotional and social aspects to foster coping skills that patients can use when they are in the community. Recreational therapists use interventions such as; anger management, relaxation, leisure skills, stress management, exercise, and communication during treatment. Occupational Therapy (OT) on the other hand, is a much more established profession and focuses mainly on the occupations of a person's life. According to the OT national organization, the American Occupational Therapy Association, Occupational therapists "help people of all ages participate in the things they want and need to do through the therapeutic use of everyday activities (occupations)" and "helps people function in all of their environments (e.g., home, work, school, community) and addresses the physical, psychological, and cognitive aspects of their well-being through engagement in occupation." ("Occupational Therapy: Improving Function While Controlling Costs," n.d.) Occupational Therapy, like Recreational Therapy, uses different activities to teach various skills needed by the patient. However, Occupational Therapy places a much larger emphasis on adaptive equipment, home management and Activities of Daily Living (ADL) independence. While, Occupational Therapy is used heavily in the rehab setting for physical improvement, it is also utilized in the behavioral health setting. In this setting, OT focuses largely ADL independence, home management and coping skills, much like Recreational Therapy and utilizes interventions such as; community orientation, safety awareness, self-care awareness, and functional living skills to produce outcomes in patients. While, RT and OT work towards different goals, the two fields work very well alongside each other and are vital in the treatment of behavioral health patients. Without the therapy from these two disciplines, patients would not learn the skills they

need to live normal lives in the community. Medication, prescribed by a doctor, is necessary for most patients with a psychiatric diagnosis; however, medication cannot solve everything. Patients are capable of learning new skills and ways of dealing with the symptoms they face from their condition. Without the skill development that is fostered through Recreational and Occupational Therapy, there would be many more recurring patients in an inpatient setting and little progress made with patients in long term facilities or in the community. The skills learned from RT and OT allow the patients to better manage the symptoms of their diagnoses in a positive way. Most healthcare professionals are aware of the positive benefits that come from RT and OT treatment, but there are some that are still skeptical. This is where evidence-based practice comes in. Not only, do these two professions deserve recognition for the work that they do on a daily basis, but there are also other issues contributing to the push for evidence-based practice in RT and OT.

Evidence-based practice is “the practice of medicine based on information gathered by a systematic and critical review of published literature. Evidence-based practice promotes decision-making that reflects best-available information, rather than clinical experience and perceptions of therapeutic efficacy, which can be inaccurate.” (“The Free Dictionary: Evidence-based Practice,” n.d.) But, why is it important? It is easy for therapists to fall into doing what comes easily, what may be fun for the patients or what has been learned through past experiences. Basing interventions off of current research isn’t always easy because it requires new learning and it can often go against what the therapist may see as routine. This causes resistance from therapists simply because it is new and may require more work to alter pre-existing interventions. (Keller

& Hodges, 2008) The negative effects of falling into complacency however, are detrimental to the perception of these therapy professionals as a whole. Especially, for Recreational therapists, there is a stigma that the patients involved are just “playing games” that offer no therapeutic purpose other than pure enjoyment. For therapists working in a behavioral health setting, the stigma is twice as bad because they are forced to fight the mental health stigma as well. The public often looks down upon those with mental illnesses because the patients are often misunderstood and the concept of being mentally ill instead of physically ill is foreign. For those involved in RT and OT, the progress they are making with mentally ill patients is discredited due to these stigmas. Recently there has been a large movement in healthcare to improve services and cost effectiveness. However, doctors don't see the need to write RT/OT orders and insurance agencies as well as Medicaid and Medicare refuse to pay for services unless it is clear that there is a therapeutic benefit. Evidence-based practice gives that confirmation. Without evidence-based research to back the interventions used, who is to say that therapists aren't just “playing games”? It is crucial to therapists in RT and OT to provide research that supports their work in order to get the recognition they deserve and the correct payment for their services. Not only will evidence-based practice increase job security but it also ensure viable treatment results across the board. With therapists on different pages as far as what works and what doesn't, it is hard to guarantee results from treatment. If therapists only use interventions that are research based, each patient should receive generally the same results, therefore, validating services.

As previously mentioned, the aim of the research as well as the case study is related to dual-diagnosis patients. For most people, dual-diagnosis refers to a patient that has a psychiatric diagnosis as well as a substance abuse disorder. The other meaning for dual-diagnosis refers to “children and adults who have developmental disability along with co-occurring mental illness and behavioral difficulties.” (Tang et al., 2008) The culmination of the two different diagnoses presents different challenges for therapists involved in their treatment. Not only are professionals treating a psychiatric diagnosis, but also a patient with an intellectual disability and lower cognitive level. It is estimated that 30-35% of persons with an intellectual or developmental disability also have a psychiatric disorder. (“Information on Dual Diagnosis,” n.d.)

According to the new DSM-V, intellectual disability severity will not be solely based on IQ scores. The new system will incorporate adaptive reasoning assessments in academic, social and practical settings. (Harris, 2013) Using the new assessments; mild, moderate, severe and profound intellectual disability will be determined. Patients can be diagnosed with a general intellectual disability or there may be a specific condition involved that contributes to the lower cognitive level. For dual-diagnosis patients, these other conditions typically include; Autism spectrum disorders, Down’s syndrome, Cerebral Palsy, and Fetal Alcohol Syndrome. These diagnoses alone present patients that typically struggle with social skills, communication, cognitive deficits and physical deficits. Coupled with psychiatric disorders including; Schizophrenia, Major Depressive Disorder, Bipolar Disorder, Intermittent Explosive Disorder, Borderline Personality Disorder and Post-traumatic Stress Disorder, therapists have to consider the various deficits associated with these disorders as well. Depending

on the psychiatric diagnosis, patients can struggle with mood regulation, social isolation, anger management, proper coping skills, communication and psychosis. Symptoms of the psychiatric diagnosis are often worse when accompanied by an intellectual disability. (Byrne, Hurley, & James, 2007) Therefore, often require a higher level of care while in the community. Areas of concern for dual-diagnosis patients fall into physical, social, emotional and cognitive categories which will be discussed in further detail in the following paragraphs.

Physically, these patients are at a much higher risk for obesity, diabetes, hypertension and Coronary Heart Disease. Persons with intellectual disabilities are at a higher prevalence for these problems due to various different factors. Some reasons include; the inability to make positive health choices like a proper diet and exercise routine and engaging in high risk behaviors. Those with a mental illness are at a higher risk for these conditions for the same reasons but also because of the medications they are prescribed. (Sohler, Lubetkin, Levy, Soghomonian, & Rimmerman, 2009) Psychotropic medications are known to cause weight gain, forcing patients to work extra hard to maintain a healthy weight. Exercise programs are used in RT and OT not only to stay healthy but also as a coping mechanism to relieve stress.

Socially, patients with an intellectual disability (ID) typically display deficits in socialization and communication. This leads to the tendency to withdraw from others and activities that are important or enjoyable to them. Children with ID are often made fun of during school or in the community which increases the likelihood of withdrawal and social isolation. Mental Illness such as depression increases social deficits due to withdrawal. Other diagnoses like Intermittent Explosive Disorder or Schizophrenia can

contribute to decreased social skills because they are unable to control their behaviors in a social setting, which tends to isolate them. RT and OT work to engage patients in social settings with staff and/or peers while increasing communication skills.

Emotionally, dual-diagnosis patients deal with the same emotions that every normal person deals with. The difference is that these patients are unable to properly deal and cope with their emotions effectively. Whether their emotions are stemming from depression, psychosis or anger; the top reason for psychiatric evaluation is an act of aggression towards himself/herself or towards another person. When emotions begin to get overwhelming for the average person, they find a way to release those emotions and feelings via a coping skill of some kind. These patients don't know how to properly cope with and release their emotions and that is usually what leads to the need for psychiatric care because the emotions become overwhelming, leading to an act of aggression or self-harm. Treatment is aimed at teaching patients positive coping tools to aid in managing their emotions.

Lastly, cognitively, patients with dual-diagnoses are at a disadvantage simply because their cognitive level is lower than normal. The intellectual disability plays a huge role in treatment because interventions have to be at a cognitive level that the patients can be receptive to. Sometimes that means using more repetition or using very simple directions, depending on the patient. When the ID and psychiatric disorders mix, sometimes it can be more stressful for the patient because he/she may not understand what is going on. Hallucinations may seem like real things or real people, making it harder for therapists and other staff to address the true problems because the patient is



not cognitively aware enough to realize he/she is hallucinating. This cognitive issue will be important during the case study portion.

In RT, interventions used for physical outcomes include aerobic exercises, aquatic therapy and stretching type exercises (i.e. yoga, tai chi, range of motion). Due to the increased risk for obesity and heart related health concerns of patients with ID and a mental illness, exercise in varying forms is beneficial. A research study has shown that a program involving physical activity as well as healthy lifestyle education produced significant ( $p < 0.05$ ) improvement in self-esteem, energy, physical appearance, social life, physical activity, eating habits, free time activities, self-perception, and quality of life in patients with mental illness. Not only did the patients improve in various emotional capacities but they also experienced a significant ( $p < 0.005$ ) decline in their body mass index (BMI) after 12 weeks. (Ivezić, Jukić, Pjević, & Muzinić, 2008) During another study, an 18 month exercise and healthy eating program produced significant weight loss in patients that had serious mental illnesses. The patients that participated lost an average of 6.5 pounds more than the control group and were able to stick to the exercise routine more effectively than the control group. (Arehart-Treichel, 2013) In a study involving patients with Down's Syndrome, a fitness and health education program not only produced improved quality of life but also a reduction in depression. (Heller, Hsieh, & Rimmer, 2004) Tai Chi has also been shown to provide physiologic and psychological benefits such as balance, strength, and a reduction in stress and anxiety in patients with chronic conditions. (Wang, Collet, & Lau, 2004) Physical interventions provide an outlet to improve physical health as well as increased coping.

For the social needs of dual-diagnosis patients, RT utilizes leisure skills, social skills and Animal Assisted Therapy. These interventions are used to increase socialization among patients, increase communication skills and in-turn increase coping. Caldwell addresses leisure as a critical therapeutic tool in treatment. Leisure offers physical, social, emotional and cognitive health through prevention and coping with daily life. Caldwell also explains that treatment incorporating leisure has positive effects on mental health while treatment neglecting leisure results in negative effects. (Caldwell, 2005) While the article does not give specifics on how to implement leisure, it is apparent that it is necessary in the treatment of dual-diagnosis patients due to the varying positive effects shown to improve mental health. Because participation in leisure is often done in a group setting, the social benefits are a large portion of why leisure is beneficial. It is harder to find research that supports social skills training for mentally ill patients however, a recent study shows that patients with Schizophrenia that participated in a social skills training program exhibited improvements in the following areas; social discomfort, social cognition, social withdrawal, interpersonal communication and quality of life. After a 6 month period, the results were maintained compared to the control group who did not participate in the social skills training. (Rus-Calafell, Gutierrez-Maldonado, Ortega-Bravo, Ribas-Sabate, & Caqueo-Urizar, 2013) This finding supports to need for communication skills in those with schizophrenia however, due to increased social isolation withdrawal associated with other diagnoses, social skills training would also be beneficial to DD patients. Animal-assisted therapy (AAT) has been known to improve the mood of patients however, according to Kathleen Griffin, it also significantly increases social interaction. Her research led to the

conclusion that social behaviors improve in all areas when patients are exposed to AAT while only certain areas of emotional well-being are affected. (Griffin, n.d.) In a study by Barker and Dawson, AAT also showed significant reduction in anxiety for patients with various psychiatric disorders while patients with mood disorders were the only patients to show improvement when not involved in AAT. (Barker & Dawson, 1998) This research supports the need for RT to address social needs with patients.

As previously mentioned, DD patients typically require psychiatric evaluation or hospitalization due to an aggressive event towards themselves or someone else. Instead of dealing with emotions appropriately, these patients either hold emotions in or deal with them in negative ways. Both outlets are unhealthy for the patients because it leads to self-harm, increased depression, increased anxiety or increased psychosis. Coping skills are essential in the emotional treatment of DD patients because medication cannot address all of the aspects of wellness. Coping skills is a seemingly broad term which RT breaks down in multiple different ways. To teach coping skills, RT typically uses stress management, anger management, relaxation and leisure. Leisure has already been discussed as a positive, evidence-based tool that is effective in a social aspect. However, leisure is also used as an outlet to manage emotions. The therapeutic benefit of leisure in patient treatment has been questioned in recent years, however, Caldwell's review of literature and research leaves no questions as to the need for leisure when promoting health and well-being. (Caldwell, 2005) In patients with depression, research shows that leisure can be utilized as a positive tool to improve depressive symptoms and prevent patients from entering a cycle of becoming more depressed, increasing emotional stability. (Nimrod, Kleiber, & Berdycheirsky, 2012)

Stress takes an emotional toll on the average person, add in multiple diagnoses and stress can be a serious health problem. Dealing with stress appropriately is a critical skill for DD patients to acquire. A recent study followed up with patients after they required an inpatient psychiatric visit. When questioned about what was the most beneficial part of treatment, stress management skills was among the few. Stress management skills were said to be helpful in dealing with day-to-day issues. (Johnston, 2013) Relaxation is a beneficial intervention in controlling emotions. It is often directly related to stress management and anger management as a tool to reduce stress and negative anger responses. In a cognitive behavioral therapy program that introduced relaxation skills to patients with psychiatric diagnosis, the patients reported significant improvements. When patients were given a follow-up evaluation, there was significant improvements in symptomatic distress when utilizing skills such as relaxation. (Lynch, Berry, & Sirey, 2011) While relaxation can be used as a form of anger management, anger management is also a separate emotional intervention. During a study, 10 patients were assessed using multiple assessment tools (MACI, NAS-PI, STAXI-2 and RBPC) on anger management while in an inpatient setting. All patients showed significant improvements in at least 3 of the dimensions measured, demonstrating an increased ability to control anger emotions. (Gold, 2007) These skills along with relaxation, leisure and stress management are important because they allow patients to have more control over their emotions and their lives.

Cognitively, DD patients can not improve in certain areas. Intellectual disabilities often can be slightly enhanced but patients will always have a cognitive deficit. Due to length of stay during inpatient treatment RT often does not have the time to truly

enhance a patient's cognitive level. However, patient's orientation and focus may be limited due to psychiatric causes and that may be improved with treatment. Reality orientation is an intervention that is used for multiple populations, mostly with those with dementia but can be used in a psychiatric setting to improve disorientation of patients. When researching reality orientation, significant evidence was not found to support long term effects. During a clinical trial Cognitive Simulation Therapy, a form of reality orientation, was found to improve emotional stability and quality of life however, long term effects have not been measured. (Khan, Corbett, & Ballard, 2014) Another study determined that through a reality orientation program patients who participated improved their Mini Mental Status Examination scores while the control groups declined. Once again however, long term effects were not shown. (Zanetti et al., 1995) In a psychiatric setting with DD patients, reality orientation may be used to aid in the emotional stability of patients but, should not be expected to produce long term effects. Concentration and focus is a very common problem for DD patients, especially those that are actively hallucinating. Concentration is needed to focus the mind and decrease hallucinations. An attention training technique was tested with schizophrenia patients and produced significant increases in the ability to concentrate on topics. This in turn, led to a decrease in "intrusive thoughts" and hallucinations in the patients which was maintained after 6 months. (Levaux, Laroi, Offerlin-Meyer, Danion, & Van der Linden, 2011) While RT staff may not use this specific technique, it is clear that developing concentration skills is beneficial for patients with schizophrenia.

OT typically addresses physical deficits for patients in a rehabilitation setting. In the behavioral health setting, physical interventions are used only if the patient

specifically requires it. The primary focus is on emotional, social and cognitive disparities however, patients are assessed according to ADL independence which can be influenced by physical restrictions. According to a study involving patients with mental illness, a self-care education program results in higher scores using the Practical Skills Test (PST) despite varying cognitive levels. (Chan, Helfrich, & Sabol, 2011) Being able to take care of oneself is essential for these patients to live independently in the community. The increase in score on the PST confirms that patients are able to develop these skills and therefore should be implemented in treatment.

OT works with patients to develop social skills, like RT, to allow patients to participate in occupations appropriately in the community. The focus of developing social skills in OT is so that patients may re-enter the community effectively and participate in needed occupations. In a study implementing a role playing intervention with patients that have Asperger's syndrome, it was found that there were significant increases in social skill use. A follow-up showed that results were maintained after one month and patients were able to utilize skills independently. (Gutman, Rapheal-Greenfield, & Salvant, 2012) While, role playing is only one way to teach social skills, this study shows that OT can effectively improve the social skills of patients with intellectual disabilities. Another study showed that simple participation in OT group sessions improved social participation based on the Social Profile test. (Donohue, Hanif, & Berns, 2011) This introduces the idea that not only are social skills interventions effective but participation in OT groups in general, improves socialization in patients. A study by Arbesman and Logsdon indicates that OT treatment focused on social skills training and cognitive training allows patients with mental illness to participate in

supported employment more effectively. (Arbesman & Logsdon, 2011) This supports the idea that social skills training is essential for patient independence and community integration.

As with RT, OT aims to develop coping skills in patients so that they may better manage emotional symptoms of psychiatric or intellectual illnesses. Similarly to RT, OT uses leisure as a tool to increase coping and may introduce games, cooking, arts and crafts or other household activities as leisure outlets. Leisure has already been discussed as an effective coping tool to increase emotional, social, physical and cognitive well-being. (Caldwell, 2005) The same information applies to OT, they may simply use different outlets when introducing leisure.

Cognitive interventions for OT include reality orientation which has already been discussed in the RT section as being an intervention that may provide short term effects. However, research does not supply long term results from this intervention. (Powell-Proctor & Miller, 1982) Cognitive re-training is used as an OT intervention and is research based as being effective. A study involving patients with severe mental illness implemented a cognitive program and found that there were improvements in the patients in multiple areas. However, the results were not firm and more research is required to further prove the effectiveness. (Reddy, 2012) Functional living skills can also be used during OT treatment as it involves teaching the patient how to perform selected living skills. This could include, meal planning, cleaning, daily chores, etc. According to a recent study, functional living skills, specifically meal planning, are effective to engage in daily life appropriately. However, teaching these skills are accepted better by mentally ill patients if they are actively doing the activity. (Grimm,

Meus, Brown, Exley, & Hartman, 2009) These skills are needed when the patients return home and can be utilized, but the retention of the skill is better if the patient has been actively engaged in it during the learning process

After reviewing research, an agency was assessed on the use of evidence based practice through the completion of a case study. This portion of the project was done alongside the internship that is required for East Carolina University RT majors. The author completed the internship at Vidant Medical Center in Greenville, North Carolina on the Behavioral Health-Dual Diagnosis (DD) unit. This unit is unique due to the fact that it is the only unit in eastern NC to serve the dual-diagnosis population. The unit is split between adult, med-psych, geriatric, acute and dual-diagnosis patients. For the adult, med-psych, acute and geriatric populations, consisting of 52 beds, there are currently 7 RT staff and 1 RT assistant. The dual-diagnosis unit however, consists of 12 beds and is staffed by 1 RT. From 7:30-4:30 Monday through Friday, she is the only therapist covering those patients. During the night shift, therapists from the other units cover the dual-diagnosis group that occurs at 6:00pm Monday through Friday. As far as OT is concerned, there is 1 OT and 1 OT assistant that cover the entire Behavioral Health unit. These therapists work primarily on the Dual-diagnosis unit, leading daily groups with the patients. OT is only utilized with patients on other units when specifically needed. The typical day for patients on the DD unit consists of; morning Reality Orientation group Monday through Friday at 9:00am (RT/OT) , 10:00am RT group that meets Monday, Tuesday, Wednesday and Friday, Cooking group(RT/OT) that meets on Thursday at 10:30am, 11:00am OT group meeting Monday, Tuesday, Wednesday and Friday, RT exercise group at 2:30pm Monday, Tuesday, Thursday, and



Friday and 6:00pm RT group every day. As evidenced by the varying group times, activities for patients, throughout the day, is very structured. Patients on the DD unit require both a psychiatric and intellectually disabling diagnosis and while functioning levels vary, the structure throughout the day keeps patients active and engaged. The estimated length of stay for a typical patient on the DD unit is 14 days however, placement issues often arise, causing the patient to stay much longer than those 14 days.

Typical RT interventions used on the DD unit include, but are not limited to; exercise, range of motion, reality orientation, stress management, anger management, communication, leisure skills, coping skills, relaxation, wellness and animal assisted therapy. As previously explored, all of these interventions relate to topics that are sufficiently backed by research supporting their effectiveness with the exception of reality orientation. While completing the 14 week internship at Vidant Medical Center, typical RT goals for patients on the DD unit included; increasing concentration, increasing the use of coping skills and increasing communication or verbalization of feelings. So, while a patient's goal may not be specifically related to the intervention used, the patients' goal can still be addressed. For example, even if a patient's primary problem is not related to anger management, the patient can still work on increasing concentration through that session by focusing on the topic at hand. Due to most RT interventions being research-based, the patients should be gaining positive results. The case study portion will measure the effectiveness of treatment and what changes the agency might need to consider.

For OT, typical interventions used include; functional living skills, safety awareness, reality orientation, cooking, community orientation, cognitive re-training, self-care awareness, coping skills and daily deeds planning. Once again, all interventions are related to evidence-based research. Typical goals for patients on this unit include; increasing ADL independence, increasing concentration and identifying/utilizing coping skills. Because interventions are research based, patients should meet the goals set by staff by their discharge date.

#### Case Study:

For the purpose of the case study, the client involved will be referred to as Tommy Johnson (pseudonym). Tommy is a 35 year old, African American male that presented to Vidant Medical Center from his apartment in Snow Hill, North Carolina. He is single and lives alone, mentioning only his father as family that he is in contact with. Tommy receives disability and is unemployed at the time of admission, however states that he is actively looking for a job. This is hard for him because he does not have a means of transportation outside of walking. Tommy's mentor comes and sees him about once a week and takes him to eat or to run errands but he says that the rest of the week he is "sitting at home, doing nothing", looking for a job, watching tv, washing clothes and cooking. Tommy was admitted on January 14, 2014 and is well known to the Behavioral Health unit due to previous admissions, the most recent being in December, 2013. Tommy has a diagnosis of Schizophrenia-paranoid type as well as Mild Intellectual Disability. Reason for admission included paranoid delusions, suicidal ideations and auditory hallucinations, which the patient was endorsing at the time of

admission. Tommy stated that voices were telling him that someone was following him and the police were going to shoot him. Per chart, patient presented paranoid and anxious. His expected length of stay was set to 14 days, as normal for patients admitted to the Dual Diagnosis unit. Problem areas for Tommy include Depression, Psychosis and Self Care. Goals are made under specific problem areas. (Whitman, 2014)

For Recreational Therapy, the main focus of treatment was on the psychosis problem area, so Tommy's goals was; to increase concentration through actively participating in at least 3 structured Recreation Therapy groups while identifying 2-3 coping skills to decrease symptoms of psychosis. Occupational Therapy was working under the self-care problem and made Tommy's goals as follows; 1) Patient will maintain focus on functional task for greater than or equal to 30 minutes without redirection for 4 of 5 sessions attended weekly for increased ADL independence in preparation for community re-entry. 2) Patient will identify 2 coping strategies and with minimal assistance and cues, use one of the strategies during sessions. 3) Patient will perform bathing, grooming and dressing tasks independently with no cues from staff. For Tommy, RT worked on increasing concentration skills during groups in order to decrease auditory hallucinations and identifying coping skills to increase ability to manage symptoms of his psychosis. Similarly, OT focused on increasing concentration to increase ability to complete ADLs and home management duties while identifying ways to cope with symptoms of Schizophrenia. (Whitman, 2014)

During RT/OT joined assessment interview, when questioned about his reason for admission, Tommy states "I've been threatened everywhere I go". Patient explains

that people have been threatening him from outside his apartment windows at night saying "I am going to kill you and your father". Patient reports that there is one female and one male saying this. Throughout interview patient is adamant about these being real threats from actual people, stating "I'm not hearing voices, this is a true story".

When questioned about who these people could be, Tommy said that he didn't know and that is what he tried to get the police to figure out. Tommy displayed some anxious behaviors during interview process, including wringing his hands which worsened when he began talking about the threats as well as a Facebook post that he needed to "fix". Patient felt as though he had posted something on Facebook that was wrong and that is why these people were threatening him. During interview, patient admits to taking all of his medications when previously he had denied this, denies auditory and visual hallucinations and denies suicidal and homicidal ideations. However, chart indicated that upon admission Tommy endorsed suicidal ideations and auditory hallucinations.

When questioned about these statements, patient explained that he said he was hearing voices in order to be admitted into the hospital, that way someone would believe that the threats were real. Tommy is fully oriented to date and place but because of Tommy's mild intellectual disability diagnosis, that serves as a cognitive barrier for him. While most people would be able to conclude they are hearing voices, Tommy was convinced they were actual people, giving him poor insight into his condition. Because he is lower functioning, cognitively, he has a more difficult time dealing with the symptoms of his psychosis. Tommy has a tendency to withdraw especially when his symptoms get worse. He states that he has people living around him in his apartment, but they don't talk to him. Outside of his mentor, Tommy identifies

no other social supports. For leisure interest, Tommy identifies basketball, exercise, listening to music, playing video games and walking as things that he actively does for leisure. Although, he identifies these activities, Tommy stated later in the interview that his routine during the day consists of “sitting at home, doing nothing”, watching TV, cooking, going out to eat and looking for a job. So, he is not participating in these activities on a regular basis as he should be. (Whitman, 2014)

Overall, from the interview, RT and OT staff concluded that Tommy’s main barriers and problem areas were decreased concentration, passive tendencies, increased psychosis, decreased insight, decreased use/awareness of positive coping skills to aid in stress-management/relaxation, and decreased involvement in positive leisure activities. Although, Tommy must overcome the barriers mentioned above, his assets include being oriented, pleasant and receptive to treatment. Tommy is expected to return to his apartment, with a decrease in psychotic symptoms, after some changes in medications and treatment from the staff on the Behavioral Health unit. (Whitman, 2014)

Tommy participated in RT reality orientation, leisure skills, cooking, decision making, exercise, therapeutic activity, being active, relaxation, communication skills, stress management, and emotions groups. All sessions, with the exception of reality orientation have research backing their effectiveness in treatment of patients. Decision making, while there is not specific research related to decision making, this session was related to making better decisions in order to increase coping. Coping skills have been shown to increase well-being in DD patients. Therapeutic Activity sessions can range from a multitude of topics and tasks, this particular session was not documented on the

specific activity however, the therapist did note that Tommy was able to focus and actively engaged throughout. During the being active group, Tommy and other patients discussed the benefits of exercising and keeping an active lifestyle. Research does show that exercise and health education is beneficial for patients. (Heller, Hsieh, & Rimmer, 2004) Tommy was also introduced to the importance of communicating to aid in coping and effective communicating skills during communication skills group. As a social skill, communication is a research based intervention. Emotions group is also not specifically research based, however discussion of emotions was related to leisure and coping. (Whitman, 2014)

Tommy got to participate in three cooking groups during his stay. This session is located in the Occupational Therapy kitchen and requires the patients to learn safety issues that are associated with cooking, be introduced to cooking as a leisure outlet and gain cooking experience by helping to prepare the meal of the week. RT and OT work together during cooking sessions to incorporate both forms of therapy. RT introduced cooking as a leisure outlet and a form of coping while OT discussed kitchen safety and functional living skills. Tommy displayed decreased concentration for portions of all three sessions and was unable to complete cooking task without prompting. (Whitman, 2014)

During his stay, Tommy attended scheduled OT groups including; therapeutic activity, cooking, community orientation, reality orientation, functional living skills, safety awareness, self-care awareness and decision making. With the exception of reality orientation, all interventions have research to back their effectiveness. Once again, therapeutic activity group documentation did not identify the specific task however it was

used as a tool to increase concentration, which is effective according to research. The therapeutic activity was once again, not documented regarding the specific activity however, Tommy was able to increase his concentration when involved in a hands-on task. Safety awareness was incorporated into a functional living skills group which provides evidence for effectiveness. Decision making was used for OT as well as RT and neither are specifically research based however, like RT the decision making topic was related to an evidence-based topic. In this case decision making was related to functional living skills. Community orientation is similar to decision making in that there is little research regarding the topic however, when discussing community orientation, OT staff were relating it back to cognitive re-training and functional living skills. For OT, one of Tommy's goals was related to ADL independence. Although there were no ADL specific groups, progress was monitored and documented based on the patient's appearance as well as observation of ADL completion. (Whitman, 2014)

At the end of the first seven days a narrative progress note was written. Looking back through the notes from the week, Tommy made progress in his concentration, had a much brighter affect and identified 2 coping skills that he could use outside of the hospital. He stated that he was feeling better and felt as though he could better recognize his symptoms however, still displayed distractibility during sessions and required prompting in order to engage. Tommy verbalized still struggling with handling the auditory hallucinations. Tommy's goal remained the same for RT due to continued need to work on concentration secondary to, lingering paranoia and hallucinations. For OT, Tommy continued to require prompting to due to distractibility and there for needed to continue working on his concentration goal. Patient required little to no cues for self-

care and had identified 2 coping skills to use post discharge. His OT goals remained the same for the following week. The second week his ability to concentrate, again increased, as there was very little mention of distractibility in daily documentation. He was able to identify 3 different coping skills including, breathing techniques and music, leisure participation and communication with others. Tommy had met his goal for RT and OT at this point, however, his goal was not changed due to discharge the day following patient review. (Whitman, 2014)

While Tommy will never be cured of his Schizophrenia, and he may have symptoms of depression from time to time, he made a lot of progress during his 17 day stay. Overall, through his stay, Tommy was receptive to treatment, he attended 75% of his groups, and he tolerated structure. The outcomes of his treatment included; displaying an improved affect/mood, increased awareness of positive coping skills, increased emotional stability, increased utilization of coping skills to decrease intensity of hallucinations, increased involvement in positive leisure outlets, demonstrated relaxation techniques, improved motivation/initiative, and increased level of physical activity. (Whitman, 2014)

Based on the case study, Tommy met all of his goals as expected due to interventions being evidence-based. He was able to respond to treatment in a positive way and developed useful tools that he can utilize post-discharge. Tommy is a good example of effective treatment processes in RT as well as OT. The interventions that were used were all related to evidence-based research and therefore outcomes were met and treatment can be considered a success. The only intervention that was not



firmly supported by research was reality orientation and because Tommy did not display disorientation, he could not provide evidence for its effectiveness.

Recommendations for the agency are slim due to the high utilization of evidence-based interventions already in place. Aquatics is one intervention that is strongly backed by research and is an option at this agency. Currently, aquatic therapy is not being utilized for DD patients. The author would like to challenge RT staff to reconsider this option for DD patients as it is very effective according to research. Outside of that recommendation, the RT and OT staff at Vidant Medical center are doing an amazing job at providing quality services that produce results in their patients. While they are doing a good job now, staff is challenged to continue to utilize evidence-based research when changing and adapting interventions to ensure that quality services continue in the future.

Based on this project, there is sufficient evidence supporting the interventions used in RT and OT treatment and their effectiveness. While Vidant Medical Center staff provided positive evidence for the use of evidence based practice, other therapists are challenged to follow their example and to utilize only those interventions that are supported by research. This is the only way for RT and OT to gain recognition and acceptance for the advances they are making with their patients. If all RT and OT staff implement interventions that are evidence-based, effective results will be seen across all treatment areas and effectiveness of treatment will be un-deniable. This will, in turn decrease the stigmas against RT and OT treatment as well as the stigma against mental health patients. One of the biggest things that needs to be changed outside of intervention implementation is the amount of research available regarding treatment.

When researching these topics and interventions, there was little, to no, research studies related to RT and specific intervention research used by OT was scarce. In order for insurance agencies, doctors and people in general to understand the effectiveness of RT and OT treatment, there has to be research available that is specific to the treatment and the patient population. It is near impossible to find research that involves DD patients and that is something that needs to change because there are a large number of people that fall into that category and that require treatment. RT and OT staff that are involved in working with this population needs to produce research regarding treatment results that have been observed. This way, treatment gets better for the patients and the information is available for other professionals to access in the future.

## References

- Arbesman, M., & Logsdon, D. W. (2011). Occupational therapy interventions for employment and education for adults with serious mental illness: A systematic review. *American Journal of Occupational Therapy, 65*(3), 238. doi: <http://dx.doi.org/10.5014/ajot.2011.001289>
- Arehart-Treichel, J. (2013). Fitness regimen helps seriously mentally ill people lose weight. *Psychiatric News*. doi: 10.1176/appi.pn.2013.5b2
- Barker, S. B., PhD, & Dawson, K. S., PhD. (1998). The effects of animal-assisted therapy on anxiety ratings of hospitalized psychiatric patients. *Psychiatric Services, 49*(6). Retrieved from <http://journals.psychiatryonline.org/article.aspx?articleid=81469>
- Byrne, C., Hurley, A. D., & James, R. (2007). *Planning guidelines for...Mental health & addiction services for children, youth and adults with developmental disability*. Retrieved from [http://www.health.gov.bc.ca/library/publications/year/2007/MHA\\_Developmental\\_Disability\\_Planning\\_Guidelines.pdf](http://www.health.gov.bc.ca/library/publications/year/2007/MHA_Developmental_Disability_Planning_Guidelines.pdf)
- Caldwell, L. L. (2005). Leisure and health: Why is leisure therapeutic? *British Journal of Guidance & Counseling, 33*(1), 7-26. doi: 10.1080/03069880412331335939
- Chan, D. V., Helfrich, C. A., & Sabol, P. (2011). Cognitive predictors of life skill intervention outcomes for adults with mental illness at risk for homelessness. *American Journal of Occupational Therapy, 65*(3), 277. doi: <http://dx.doi.org/10.5014/ajot.2011.001321>
- Donohue, M. V., PhD, OTL, FAOTA, Hanif, H., MA, OTR, & Berns, L., BS Psych, BSOT. (2011). An exploratory study of social participation in occupational therapy

groups. *Special Interest Section Quarterly: Mental Health*, 34(4), 1-3. Retrieved from

<http://search.proquest.com.jproxy.lib.ecu.edu/docview/905918992?accountid=10639>

FAQ About RT/TR. (n.d.). Retrieved from <https://www.atra-online.com/what/FAQ>

The free dictionary: Evidence-based practice. (n.d.). Retrieved from <http://medical-dictionary.thefreedictionary.com/evidence-based+practice>

Gold, A. L. (2007). *Anger management as a component of inpatient residential treatment with adolescents: A multiple case study* (Doctoral dissertation, Northern Arizona University, 2007). UMI Dissertations Publishing.

Griffin, K. (n.d.). *The impact of animal-assisted therapy on social interaction and emotional well-being among older adults with dementia* (Rep.). Retrieved from <http://rtwiseowls.files.wordpress.com/2013/04/kathleen-griffin.pdf>

Grimm, E. Z., Meus, J. S., Brown, C., Exley, M., & Hartman, S. (2009). Meal preparation: Comparing treatment approaches to increase acquisition of skill for adults with schizophrenic disorders. *The Occupational Therapy Journal of Research*, 29(4), 148-153. Retrieved from

<http://search.proquest.com/docview/220300589>

Gutman, S. A., Rapheal-Greenfield, E. I., & Salvant, S. (2012). The effect of an occupational therapy role-playing intervention on the social skills of adolescents with Asperger's Syndrome: A pilot study. *Occupational Therapy in Mental Health*, 28(1), 20-35. doi: 10.1080/0164212X.2012.650953

Harris, J. C. (2013). New terminology for mental retardation in DSM-5 and ICD-11.

*Current Opinion in Psychiatry*, 26(3), 260-262. Retrieved from

<http://www.medscape.com/viewarticle/782769>

Heller, T., Hsieh, K., & Rimmer, J. H. (2004). Attitudinal and psychosocial outcomes of a

fitness and health education program on adults with down syndrome. *American*

*Journal of Mental Retardation*, 109(2), 175-185. Retrieved from

<http://www.aaidjournals.org/doi/pdf/10.1352/0895->

[8017%282004%29109%3C175%3AAAPOOA%3E2.0.CO%3B2](http://www.aaidjournals.org/doi/pdf/10.1352/0895-8017%282004%29109%3C175%3AAAPOOA%3E2.0.CO%3B2)

Information on Dual Diagnosis. (n.d.). Retrieved from

<http://thenadd.org/resources/information-on-dual-diagnosis-2/>

Ivezić, S., Jukić, M. K., Pjević, Z., & Muzinić, L. (2008). Wellness program as

psychosocial intervention for improvement of physical and mental health in

persons with mental illness. *European Psychiatry*, 23(2), S399. Retrieved from

<http://dx.doi.org/10.1016/j.eurpsy.2008.01.1380>

Johnston, E. R. (2013). A preliminary follow-up study of patients treated at an inpatient

psychotherapy unit. *South African Journal of Psychology*, 43(3), 370-378.

Retrieved from <http://sap.sagepub.com/content/43/3/370.full.pdf+html>

Keller, M. J., EdD, CTRS, & Hodges, J. S., PhD, CTRS. (2008). How Do You Know

Activities Make a Difference? *Activities, Adaptation & Aging*, 27(3), 4th ser., 65-

78. doi: 10.1300/J016v27n03\_05

Khan, Z., Corbett, A., & Ballard, C. (2014). Cognitive stimulation therapy: Training,

maintenance and implementation in clinical trials. *Pragmatic and Observational*

*Research*. doi: <http://dx.doi.org/10.2147/POR.S56000>

Levaux, M., Laroi, F., Offerlin-Meyer, I., Danion, J., & Van der Linden, M. (2011). The effectiveness of the attention training technique in reducing intrusive thoughts in schizophrenia: A case study. *Clinical Case Studies, 10*(6), 466-484. doi: 10.1177/1534650111435696

Lynch, K., Berry, C., & Sirey, J. (2011). A group-oriented inpatient CBT programme: A pilot study. *The Cognitive Behavior Therapist, 4*(1), 38-51. doi: <http://dx.doi.org/10.1017/S1754470X10000152>

NCTRC - National Council for Therapeutic Recreation Certification. (n.d.). Retrieved from <http://nctrc.org/aboutnctrc.htm#5>

Nimrod, G., Kleiber, D. A., & Berdycheirsky, L. (2012). Leisure in coping with depression. *Journal of Leisure Research, 44*(4), 419-449. Retrieved from <http://search.proquest.com/docview/1282594430>

Occupational Therapy: Improving Function While Controlling Costs. (n.d.). Retrieved from <http://www.aota.org/About-Occupational-Therapy/Professionals.aspx>

Powell-Proctor, L., & Miller, E. (1982). Reality Orientation: A critical appraisal. *The British Journal of Psychiatry, 140*(5), 457-463. Retrieved from <http://bjp.rcpsych.org/content/140/5/457.full.pdf+html>

Reddy, F. L. (2012). *The recovery of cognitive and social cognitive functioning in response to social cognition interaction training administered in community settings: A longitudinal study* (Doctoral dissertation, The University of Nebraska). UMI Dissertations Publishing.

Rus-Calafell, M., Gutierrez-Maldonado, J., Ortega-Bravo, M., Ribas-Sabate, J., & Caqueo-Urizar, A. (2013). A brief cognitive-behavioural social skills training for

- stabilised outpatients with schizophrenia: A preliminary study. *Schizophrenia Research*, 143, 327-336. Retrieved from [www.elsevier.com/locate/schres](http://www.elsevier.com/locate/schres).
- Sohler, N., PhDMPH, Lubetkin, E., MDMPH, Levy, J., PhD, Soghomonian, C., MA, & Rimmerman, A. (2009). Factors associated with obesity and coronary heart disease in people with intellectual disabilities. *Social Work in Health Care*, 48(1), 76-89. Retrieved from <http://dx.doi.org/10.1080/00981380802451160>
- Tang, B., MD, FRCPC, Bryne, C., MD, Friedlander, R., MBChB, FRCPC, McKibbin, D., MD, FRCPC, Riley, M., BMBS, MRPsych, MPhil, FRCPC, & Thibeault, A., MD, FRCPC. (2008). The other dual diagnosis: Developmental disability and mental health disorders. *BC Medical Journal*, 50(6), 319-324. Retrieved from <http://www.bcmj.org/article/other-dual-diagnosis-developmental-disability-and-mental-health-disorders>
- Wang, C., MD, MSc, Collet, J. P., MD, PhD, & Lau, J., MD. (2004). The effect of Tai Chi on health outcomes in patients with chronic conditions. *JAMA Internal Medicine*, 164(5), 493-501. Retrieved from <http://archinte.jamanetwork.com/article.aspx?articleid=216794>
- Whitman, E. (2014). *Case study final report* (Rep.).
- Zanetti, O., Frisoni, G. B., De Leo, D., Buono, M. D., Bianchetti, A., & Trabucchi, M. (1995). Reality Orientation Therapy in Alzheimer Disease: Useful or not? A controlled study. *Alzheimer Disease and Associated Disorders*, 9(3), 132-138. Retrieved from [http://jw3mh2cm6n.search.serialssolutions.com/?ctx\\_ver=Z39.88-2004&ctx\\_enc=info%3Aofi%2Fenc%3AUTF-8&rft\\_id=info:sid/summon.serialssolutions.com&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:jo](http://jw3mh2cm6n.search.serialssolutions.com/?ctx_ver=Z39.88-2004&ctx_enc=info%3Aofi%2Fenc%3AUTF-8&rft_id=info:sid/summon.serialssolutions.com&rft_val_fmt=info:ofi/fmt:kev:mtx:jo)

urnal&rft.genre=article&rft.atitle=REALITY+ORIENTATION+THERAPY+IN+ALZ  
HEIMER-DISEASE+--+USEFUL+OR+NOT+--+A+CONTROLLED-  
STUDY&rft.jtitle=ALZHEIMER+DISEASE+%26+ASSOCIATED+DISORDERS&rft  
.au=ZANETTI%2C+O&rft.au=FRISONI%2C+GB&rft.au=DELEO%2C+D&rft.au=  
DELLOBUONO%2C+M&rft.date=1995&rft.pub=LIPPINCOTT-  
RAVEN+PUBL&rft.issn=0893-0341&rft.eissn=1546-  
4156&rft.volume=9&rft.issue=3&rft.spage=132&rft.epage=138&rft.externalDBID=  
n%2Fa&rft.externalDocID=A1995RT63500003¶mdict=en-US