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Therapeutic Benefits of Art Therapy with Adults who have Traumatic Brain Injury with Depression and/or Anxiety

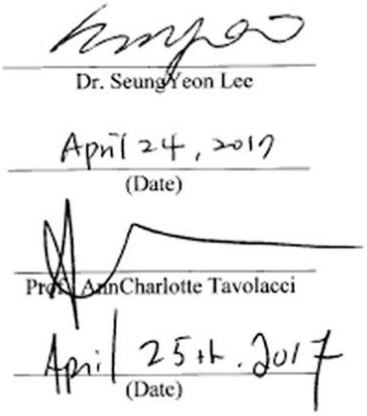
An Honors College Thesis

by

Guadalupe Flores

Spring 2017

Department of Art



Abstract

This honors college thesis is about how art therapy can impact depression and/or anxiety with Traumatic Brain Injury(TBI). Traumatic Brain Injury is a direct blow or penetrating object to the head that was caused by acceleration, deceleration or direct force. TBI can impact quality of life emotionally, physicality and their cognition. Depression is one of the most common diagnosis within TBI clients, about thirty-three percent of the population are diagnosed with depression post one year from their accidents (Driskell, Starosta, & Brenner, 2016). Anxiety is the second most common diagnosis within TBI clients. The art therapy interventions that are developed will be using paint, collage, and nature/tactile materials. The therapeutic benefits from each of these directives may help promote relaxation, reduce tension and increase self-expression, promote a sense of achievement and self-empowerment.

Keywords: Traumatic Brain Injury, depression, anxiety

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I. Introduction

This honors thesis is about how art therapy can be therapeutic and beneficial for Traumatic Brain Injury clients with adults who were/are diagnosed with depression and/or anxiety. When conducting the research of this thesis the student found that depression and anxiety are most common diagnose within this population (Coetzer, 2010). About thirty-three percent of the Traumatic Brain Injury population are diagnosed with depression post one year from their accidents. (Driskell, Starosta, & Brenner, 2016). It is quite common for clients with brain injuries to get diagnosed with depression one year after their accident(s) since their quality of life may change dramatically. Many clients experience lower quality of life, depending on their severity cannot to go back to their normal lives. Due to physical changes in their bodies like not being able move around freely, having speech difficulties and poor cognitive skills can lead to depression.

Since depression is one of the most common diagnoses, clients are sometimes diagnosed with anxiety as well. About eleven percent of the Traumatic Brain Injury population are diagnosed with Generalized Anxiety Disorder (GAD) as well as many other several types of anxiety disorders (Osborn, Mathias, Fairweather-Schmidt, 2016). Clients who have a mild Traumatic Brain Injury and can go back to their job(s) or who are currently looking normally have anxious thoughts of them being able to handle the stress/workload and if they are physically capable of maintaining their job. Other situations and problems that clients have can lead to different anxieties. It is also common for clients to suffer from Post-Traumatic Stress Disorder (PTSD). This diagnosis falls under the category of anxiety but is not limited to this. PTSD is mostly common with military war veterans but it is possible that a client can get diagnosed with PTSD if

they did not serve in the military. If the accident was severe enough and if the client can recall all events, then this may lead to PTSD.

The purpose of doing research on this topic is based off from personal experience when the student interned at Long Island Head Injury Association. There the art therapy intern saw distinct types of severities and the uniqueness of everyone. What struck her the most was working with one of the clients whom she worked with regularly. The client was not able to speak effectively due to his echolalia and was quite emotional at times. This client was diagnosed with depression based on the information given to the art therapy intern. This came to the student's attention and wanted to conduct her case study on this client to see what would enhance his mood. This client had trouble focusing on his task and never really got into his artwork. He was not able to start his artwork all on his own and required assistance constantly. The art therapy intern was always there to help him out despite him having his aid with him always, his aid never really helped him with the creative process whatsoever. The case study that was conducted with the client had to be molded on how well he could focus on the subject and if he felt enthusiastic about the art project. What the art therapy intern looked for in the case study was to see if his mood had improved after the art making session, if he had spoken more that day and focused more on his task.

With this information, this lead to a series of questions the art therapy intern wanted to find the answers to, which inspired her to do research on this subject matter:

1. How does art therapy impact quality of life of an individual with Traumatic Brain Injury who has depression and/or anxiety?
2. How can the use of paint, collage, nature materials and mindfulness techniques be used to help reduce depressive and/or anxiety symptoms within Traumatic Brain Injury

clients?

Art therapy is used as part of the rehabilitation process with Traumatic Brain Injury clients. There are many facilities like day programs like Long Island Head Injury Association in which art therapy is given to clients in group form. Using art as a medium to help clients use their cognitive skills, express emotions and communicate through the means of art. The sessions should focus on the client's strengths and work on those to help them create a new sense of self and bring upon acceptance and help reduce symptoms of anxiety and/or depression.

II. Literature Review

Clinical Classification of Traumatic Brain Injuries

Traumatic Brain Injury (TBI) is one of the main causes of death within the United States, over fifty thousand people die due to severe accidents. How do these injuries typically occur? Brain injuries consist of a direct blow or penetrating object to the head that was caused by acceleration, deceleration or direct force. Clients who have suffered a brain injury suffer temporary or permanent brain damage and cannot function properly nor effectively post accidents during the rehabilitation process. According to Zollman's (2010) book *Manual of Traumatic Brain Injury* about thirty-five percent of the population suffer brain injuries mainly through falls alone. Vehicle collisions and/or traffic accidents comes in second, roughly around seventeen percent of the population acquire their brain injuries in this matter. About sixteen percent of the population sustain their brain injuries by being stuck or against an object and about ten percent acquire their brain injuries through assaults.

The definition of Traumatic Brain Injury (TBI) is an "alteration of mental state occurring after trauma, which some clients may or may not lose state of consciousness" (Zollman, 2011, p. 7). TBI is classified from mild, moderate to severe brain injuries. Each is classification is rated by Glasgow Coma Scale (GCS) which measures a client's level of consciousness. The scale consists of three categories: Eyes, this measures a client's eye movement if it is spontaneous, reacts to either sound or pressure or not at all, Verbal, if the client is orientated, confused, just saying words, making sounds or nothing at all and Motor, if the client can obey commands, localizing, normal, abnormal, extension or nothing at all. Depending on the severity of the brain injury the client is given a rating and classification from mild, moderate and/or severe. It is

important measure and classify clients who have acquired their brain injuries so a treatment plan is made within the rehabilitation process. Each severity is classified as follows:

Mild brain injuries. If the client can communicate and follow commands and wake up within a state of confusion, then the rating that they receive on the GCS scale will consist of thirteen through fifteen. Clients can either suffer from loss of consciousness, loss of memory either before or after the accidents, alteration of mental state like feeling disorientated or confused (Zollman, 2011 pp. 43-45). Majority of brain injury clients fall within this category but this diagnosis should not to be confused with concussions. Hence the diagnoses need to be identified with monitoring the clients and the rating received on the Glasgow Coma Scale. If the client recovers quickly from a head injury the correct diagnoses concussion should be given. Clients who receive one or more of the symptoms stated above should be diagnosed with mild Traumatic Brain Injury. Subtypes of mild Traumatic Brain Injury are complicated mild Traumatic Brain Injury which is the client's rating on the Glasgow Coma Scale is at thirteen through fifteen but show signs of trauma related abnormality. Clients with a complicated mild TBI have worse cognitive functioning skills compared to clients who have an uncomplicated mild Traumatic Brain Injury. Recovery for clients who have a complicated mild TBI is similar to clients who have moderate brain injuries (Zollman 2011, p. 45). Overall clients that do get diagnosed with a mild Traumatic Brain Injury do not suffer from long term disability.

Moderate brain injuries. Clients that fall within this category are in a state of drowsiness but can identify pain in certain areas of their bodies. They are at a higher risk of clinical deterioration and must be monitored carefully, the rating that clients receive on the GCS scale range from nine through twelve. Clients within this category of brain injuries can live independently but need assistance with finances, transportation and difficult tasks.

Severe brain injuries. Within this category of brain injury clients are not able to follow commands and have significant brain dysfunction and are at a higher risk of a secondary brain injury and deterioration, the rating that they receive on the GCS ranges from three through eight.

Classification by Mechanism

Traumatic Brain Injury can also be classified by mechanism. As stated above the definitions of Traumatic Brain Injury were described in clinical terms to understand how the severity is measured. How the accident affected the body and the head/brain physically are going to be described below. There are three diverse types of injuries a client can acquire physically post-accident(s) and/or assault or whatever the cause of their injuries may be, each goes as follows:

Closed/blunt headed injuries. These types of injuries consist of a direct force to the head with a blunt object, the most common causes of these type of injuries are mainly falls, car accidents and/or assaults.

Penetrating injuries. A Penetrating injury is caused by an object that penetrated the head or skull, this can be caused by knives, gunshots etc.

Blast related injuries. This type of injury is caused by the overpressure of explosive waves that penetrate through the client's cranium. According to Zollman's (2010) *Management of Traumatic Brain Injury* (2011) this type of injury can cause damage to the blood-brain barrier or gray white matter junction and can cause cerebral edema axonal injury, apoptosis and tissue degeneration. With this type of injury common in war veterans and those who are serving in the military, but this is not limited just to them.

Impairments After Traumatic Brain Injury

After Traumatic Brain Injury accidents clients go into rehabilitation, it is important to give the correct diagnoses so that the proper treatment plan is given. Clients after their accidents

lack mobility and not able to move around on their own depending on the severity. Many clients post accidents show signs of limited mobility in which they have a decreased range of motion, and they are not able to walk on their own require assistance with their caregiver or aid. Some clients become wheelchair bound or require a walker or a special cane. Many also have decreased coordination, movement disorders, changes in balance, some clients become bedridden and are not able to move out of their beds on their own. If the TBI is severe enough it can result in a persistent vegetative state for the client. Sensory impairments in which clients can not feel light touch, changes in temperature deep pressure and pain sensation. Clients also have trouble with their cognitive skills and changes in memory in which many have short term memories. They also show signs of not communicating effectively and have impairments in their speech.

Concussions. Is an altered mental state after trauma, the client can suffer from loss of consciousness. When a client is diagnosed with a concussion their recovery is faster and they can go back to their normal lives. As stated above when describing mild Traumatic Brain Injury this is not to be confused with.

Post traumatic amnesia. This is an impairment of not being able to recall events after the client's accident. The effects of post traumatic amnesia are not long term, clients normally regain their memories shortly after. In the case of Retrograde Amnesia, the client can recall all events of their accident. Anterograde Amnesia is not being able to form new memories after their accidents which is quite common amongst this population.

Post-concussion disorder. This disorder affects memory, cause nausea, sleeping problems either excessive or lack of sleep, depression, dizziness, drowsiness and sensitivity to noise.

The Brain and Traumatic Brain Injury

During the client's accidents, the brain is the biggest part of the body that becomes severely affected, alongside with damage done to the body. Any damage done to the body can always heal even if the changes are severe and clients are not able to function properly but any damage that occurs in the brain will have a permanent effect. If different parts of the brain became affected, then the person's body will become affected as well. Since different regions of the brain become damaged after Traumatic Brain Injury accidents it can affect the way clients create their artwork during art therapy sessions. Many clients might require assistance depending on severity and if they are not able to start the artwork by themselves.

The Brain and Art Therapy

As stated above, each side of the brain controls either side of the body. Many client's that are right handed are dominate on the left hemisphere of the brain, and those who are left handed are dominate on the right hemisphere of the brain. If the left hemisphere of the brain become damage/effected post-accident(s) then the client's language, art production change and the usage of their right side of their bodies decreases depending on severity. This is quite common within the Traumatic Brain Injury population; many clients are not able to fully use either their right or left sides of their bodies. In many cases for example clients who were right handed are now forced to use their left hands because of weakness on their right hands or they are not able to use it at all. According to Zadiel's *Neuropsychology of Art* (2005), the example given within the text states how a young artist suffered from accident and damaged their left hemisphere of their brain which affected her right hand temporarily. After her injury, regression was present in her artwork until six months where her drawing abilities went back to normal. Although their injuries were temporary this still proves as an example of how any kind of brain damage can affect drawing

abilities amongst clients. Depending how severe the injury to the brain was can show us how the artistic style can change post injury.

The brain also functions in retaining and recalling images, since many clients have short term memory loss and are not able to recall mental images, the use of art therapy helps with this specific problem amongst this population. Art therapist rely on visual perception and imagery through expressive art with clients. If clients engage in kinesthetic motion like a scribble for example can help in imagery formation. This activates the sensorimotor cortices of the brain and reinforces them especially if the images are repeated throughout art therapy sessions (Lusebrink, 2014). The use of art therapy can help clients form new neural pathways due to the brain's neuroplasticity. Since the brain is the powerhouse of the body any slight damage within any region of the brain affect the client. It is important to understand what regions of the brain controls what on the body, rather if it is physical, verbal and nonverbal.

The frontal lobes. This part of the brain "is responsible for the regulation of emotion and personality". The left frontal lobe controls the language and the right frontal lobe controls emotions. (McGuiness & Schnur, 2013, p. 254).

Temporal lobes. This region of the brain controls hearing, memory, acquisition and visual perception. If this part of the brain gets damaged then client's will have difficulties with short term memory, facial recognition and selective attention deficits.

Parietal lobes. Are responsible for "cognition and perception of the world around us". (McGuiness & Schnur, 2013, p. 254).

Occipital lobe. This part of the brain controls vision, if this part of the brain gets damaged then the client may have visual field neglect, inability to recognize colors and/or words they may suffer from reading and/or writing impairments and may hallucinate.

Cerebellum. This region is responsible for coordination, if this area gets damaged then clients may have look like they are swaying or staggering as they walk.

Brain stem. This part of the brain is attached to the spinal cord, if this area gets affected then client's alertness is decreased, they may have sleeping problems, and their sense of balance decreases.

The main goal of art therapy sessions with Traumatic Brain Injury clients is to help them accept their deficits that was caused by their traumatic brain injuries, focus on their strengths and gain a new sense of self, throughout that process clients should be able to feel safe and comfortable within the art therapy sessions. Desired goals for clients within this population is to have them self-initiate art making either independently or with help from the art therapist with hand over hand intervention or minimal things like taping down their paper or gathering materials they would like to use especially if their mobility is limited. In the chapter of *Art Therapy and Health Care Management* a case study that was conducted with a fifty-seven-year-old man who had sustained two brain injuries. The client was very apathetic, withdrawn and got distracted easily. Due to his erratic behavior during the art sessions with instructions given not to speak by the therapist showed significant signs of depression, anxiety, poor regulation of his emotion and poor-problem solving skills (McGuiness & Schnur, 2013, p. 260). Apperception is achieved with this client, he felt safe with art therapist, during the art therapy session and his environment and met all his goals. Art had helped this client to reduce his anxiety and depressive symptoms and helped him create a new sense of self as an artist. The clients during their rehabilitation processes also had a combination of other therapies alongside with art therapy. They were offered music therapy to help with their memory, yoga for reducing stress, and each where seeing a psychiatrist. Normally during the rehabilitation process clients are offered diverse

types of therapies including art therapy. Special facilities or Day Programs like Long Island Head Injury Association, in which clients are among other Traumatic Brain Injury clients have programs they go to which include Art Therapy in a group setting, Horticulture which is a class dedicated to taking care of plants, Music Therapy, Cognitive and culinary just to name a few which are offered at Head Injury.

Emotion Perception

There are many clients within this population that are not able to identify certain emotions especially negative ones. With the discussion above about the brain and which section controls what, we know that the frontal lobes, specifically the right-side controls emotion. According to the article *Emotion perception after moderate-severe Traumatic Brain Injury: The valence Effect and the role of working memory, processing speed, and nonverbal Reasoning* was conducted to see how well clients within the Traumatic Brain Injury population could identify facial emotions. Clients were chosen based on moderate to severe injuries, each varying from time ranges meaning how long they had their brain injuries. The group(s) were given colored pictures of actors and/or actress with six basic facial emotional expressions and videos with facial expressions each ranging from twenty-percent through one-hundred percent expression. Clients that were diagnosed with severe depression and high levels of anxiety were not included in this study. Overall negative emotions were more difficult to define than the positive emotions within this study. The most common negative facial emotions that clients were not able to recognize were anger, fear being the most difficult of them all and disgust (Rosenberg, Dethier, Kessels, Westbrook & McDonald, 2015).

Depression and Traumatic Brain Injury

Depression is one of the most common diagnoses within the Traumatic Brain Injury population. Some clients have a double diagnosis with depression and anxiety. Statistics show that about thirty-three percent of clients within this population develop major depressive disorder post one year of their accident(s) (Driskell, Starosta & Brenner, 2016). Clients either receive anti-depressants and/or psychotherapy, but no evidence shows that psychotherapy can help reduce major depressive symptoms. Since depression is the most common diagnosis it is important to find therapies that are specially shaped to help reduce depressive symptoms. This thesis will explore ideas of how art therapy can be used within this special setting to help clients who have sustained a Traumatic Brain Injury, how it affects the client(s) and how art therapy can be used to reduce symptoms of depression.

The full definition of major depressive disorder is "a depressed mood or loss of interest and pleasure in all activities" (Coetzer, 2010, p.157). Symptoms of depressive disorder can often be confused with the lack of motivation, lack of initiation, poor energy, fatigue and apathy which are common within Traumatic Brain Injury clients so it is hard to diagnose major depressive disorder since many clients have the same symptoms sometimes. Major symptoms of depressive disorder consist of feelings of hopelessness and thoughts of death or suicide. Other symptoms that can be associated with depressive disorder would be apathy, poor concentration and memory and sleep disturbances, even though many clients who have sustained a TBI typically have these disorders without having a diagnosis of depression. If clients start to have a few or more of these symptoms in correlation of starting to feel hopeless and having thoughts of suicide, then it is highly important for them to receive the treatment they need. It is highly important to know the difference between these symptoms to better understand the needs of the clients, since many

clients within this population have a strong lack of motivation and interest. Some therapies that can help reduce depressive symptoms consist of mindfulness approaches, cognitive-behavior therapy, behavioral activation and psychodynamic and psychoanalytic approaches to name a few. Many studies have been conducted with clients who are diagnosed with depression to see if art therapy sessions can help reduce symptoms and improve their lives overall.

The article *Brief Report of affective state and depression status after Traumatic Brain Injury* conducted a study with patients who were diagnosed with depression to measure the negative and positive affect of clients who have a mild to severe Traumatic Brain Injury and who are suffering from major depressive disorder or who had a history of depressive episodes. The way this study was conducted was by gathering data in a cross-sectional study examining the long-term outcomes after Traumatic Brain Injury clients, depression was the only diagnoses that was covered in this study, clients diagnosed with anxiety were not included. Clients who scored higher on the positive affect showed higher energy, concentration and positive engagements, while those who scored lower showed lethargy and sadness. Those who scored higher on the negative affect showed more anger, disgust, fear, guilt, and nervousness, lower scores showed calmness and serenity. Clients with a low positive affect and high negative affect are most likely having a current depressive episode. Even after the depressive episode ends the current score usually persist, which means that current client is still in that depressive episode or has lingering effects from it. This study states that clinicians need to screen both depression and anxiety disorders within this current population to find effective treatment. Further research on the subject needs to be continued as stated by the authors of this study. In conclusion, the authors Juengst, Arenth, Whyte, and Skidmore (2014) of this study state:

> "In summary, the persistence of a high negative affect after the resolution of a depressive episode and the association of both current and prior depressive episodes with increased

> disability strongly suggest that need for clinicians to assess and treat affective state in addition to screening for both depressive and anxiety disorders among individuals with chronic TBI. (Juengst, Arenth, Whyte & Skidmore, 2014)."

This article is essential in that it measures positive and negative effects Traumatic Brain Injury clients with depressive episodes only. When Traumatic Brain Injury clients are depressed they lack the motivation to complete a given task, making it harder to help them. Using art therapy may help clients within this population by recognizing that a client with a depressive episode that has ended or is close to ending will most likely still have minor feelings of depression that will affect their concentration and motivation to complete their tasks, thus finding a way to create more effective treatment to prevent/assist this issue within this population. Even though this study needs to further their research to the broader aspects of the Traumatic Brain Injury population, it is a start to begin to see the correlations of how high negative affect and low positive affect in a client can affect their mood and before/current/after depressive states (Juengst, Arenth, Whtye & Skidmore, 2014).

Changes in Life Roles & Satisfaction

Changes in life happen frequently when clients experience drastic measures physically and cognitively. Many clients prior their accident(s) had roles like being a friend to someone, having hobbies, a student, someone who practiced religion and a worker had changed. The lack of participation due cognitive and physical changes within clients who have suffered a Traumatic Brain Injury can result in declining life satisfaction within clients who have moderate to severe brain injuries. This is common within the Traumatic Brain Injury community. The decline in life satisfaction can also lead to major depressive symptoms. To decrease depressive symptoms clients with brain injuries can participate in leisure activities within Traumatic Brain Injury community programs, support groups and family activities. About seventy-one percent of the

TBI community were loss in participation in their life roles, the most frequent losses were being a worker, hobbyist and a friend. (Juengst, Bogner, Arenth, O'Neil-Pizrozzi, Dreer, 2015, pp.354-359). Clients who have a greater disability, both cognitive and physical experience decreases in life satisfaction, which is highly correlated with a higher chance of being diagnosed with depression, clients who participated in activities had better life satisfaction overall.

According to the *article Trajectories of life satisfaction after Traumatic Brain Injury: Influence of life roles, age, cognitive disability, and depressive symptoms* measured the life satisfaction after TBI was measured five years' post injuries. The authors state that life satisfaction within the community will improve over time but it is a lengthy process and may take many years for the said clients, but some clients will experience a decline in life satisfaction (Juengst, Bogner, Arenth, O'Neil-Pizrozzi, Dreer, 2015). It is important to understand life role changes after traumatic brain injuries occur to the client(s). Due to lack of activity in their lives this can lead to depressive symptoms. Keeping our clients engaged and participating in community based programs is essential for them to maintain homeostasis and increase life satisfaction and is also essential to prevent social isolation. Since many clients have speech impediments many are not able to speak as effectively to others within their community and family and friends around them. This can make the clients feel unwanted and isolated so it is highly important to include them in social activities.

Anxiety & Traumatic Brain Injury

Anxiety alongside with depression is the second highest diagnoses within the Traumatic Brain Injury population. About sixty percent of clients with lower functioning levels like poor social and, cognitive skills develop co-occurring anxiety disorder (Driskell, Starosta & Brenner, 2016). Since anxiety is the second most common diagnoses it is very important that research

should be done on the subject since anxiety "contributes to postinjury functional outcomes and quality of life" according to the authors. The most common anxiety disorder is Generalized Anxiety Disorder (GAD), about eleven percent of clients are diagnosed and about thirty-seven percent have high levels of anxiety after brain injuries (Osborn, Mathias & Fairweather-Schmidt, 2016). Although GAD is not the only type of anxiety disorder clients can sustain, they can also have either of the following:

Panic disorders (PD). The definition of panic attacks are the occurrences of unexpected and recurring panic attacks (Coetzer, 2010 p. 83). Most common symptoms of panic disorders include dizziness, trembling and derealization. Panic disorders after brain injuries are usually common after the first-year post injury. Clients who were in a state of confusion who wake up in hospitals without having any memory of how they got there can lead to stress and anxiety resulting in a panic attack (Coetzer 2010, pp. 87). Panic Attacks normally happen within the first stages of Traumatic Brain Injury, within the later stages of Traumatic Brain Injury some clients still have panic disorders. Clients who are diagnosed with Panic Disorder range from four to thirteen percent of the community (Mallya, Sutherland, Pongracic, Mainland & Ornstien, 2015, p. 412). Some examples how some therapies can help reduce panic symptoms/disorders is relaxation techniques, cognitive-behavior therapy and mindfulness approaches to name a few.

Generalized anxiety disorder (GAD). Is defined as the excessive anxiety regarding several activities that a person can find difficult to control. Symptoms that can produce in GAD is fatigue, restlessness irritability, muscle tension, and difficulty sleeping as stated within the book (Coetzer, 2010, p. 143). Other symptoms of diagnosing GAD in clients that have a brain injury consist of difficulty falling asleep (although sleeping problems can occur before diagnosis of GAD, it can lead to future anxiety), worries about the future because of cognitive problems

due to TBI if the client returns back to work or the loss of role function in which the client cannot do what they used to prior to injury but these symptoms should not be confused with GAD, in which it is common for clients to worry about their lives after their TBI. About three to twenty-eight percent of the community are diagnosed with GAD (Mallya, Sutherland, Pongracic, Mainland & Ornstien, 2015, p. 412). Some therapies that can help reduce symptoms of GAD within the TBI population are supportive psychotherapy, cognitive-behavior therapy, and mindfulness approaches just to name a few.

Obsessive compulsive disorder (OCD). Can be defined as repeated obsessions or compulsions severe enough to induce stress and can be time consuming for the individual. As stated by the author "Compulsions are defined as repetitive behaviors that are engaged in with its main purpose being to reduce anxiety. Obsessions are recurrent and intrusive thoughts or images that cause significant anxiety to the person" (Coetzer, 2010 p. 112). It is rare for clients within the Traumatic Brain Injury population to get diagnosed with OCD, two to fifteen percent of the population are diagnosed with OCD (Mallya, Sutherland, Pongracic, Mainland & Ornstien, 2015, p. 412).

Phobias. Phobias can be defined as excessive fear in response to presence or object of a specific stimulus as stated by the author. Clients after brain injuries can develop anxiety after being in a severe accident in which they will avoid going to the doctor or driving. About one to ten percent of the TBI community can develop phobia as part of the anxiety disorders (Mallya, Sutherland, Pongracic, Mainland & Ornstien, 2015, p. 412). Overall phobias are not a common diagnosis within the Traumatic Brain Injury population.

Social anxiety disorder (SAD). Can be defined as the fear or anxiety in social situations, this can last about six months and can have a negative impact on the client's social life. Clients

can also feel a loss of confidence or difficulties in social situations (Mallya, Sutherland, Pongracic, Mainland & Ornstien, 2015, p. 415).

Within the population clients who had sustained a mild Traumatic Brain Injury will most likely develop an anxiety disorder compared to clients who had sustained a moderate to severe brain injury (Mallya, Sutherland, Pongracic, Mainland & Ornstein, 2015, p. 412). Understanding the diverse types of anxiety disorders is essential to help create directives to help reduce symptoms in clients experiencing anxiety. Knowing the secondary anxiety disorders and the symptoms along with it will help us understand how create art directives with the use mindfulness approaches for a beneficial therapeutic experience within the TBI community.

Post-Traumatic Stress Disorder & Traumatic Brain Injury

Post-Traumatic Stress Disorder (PTSD) was once classified under anxiety disorders but the most recent Diagnostic Statistic Manual-5 (DSM-5) it was reclassified as a stressor related disorder rather than an anxiety disorder. (Obsorn, Mathias & Fairweather-Schmidt, 2016, p. 248). Even though PTSD is mainly associated with military war veterans in which blast injury (in classification by mechanism) would be the main cause of their TBI, the high pressure and exposure of explosives can affect the brain. PTSD can affect anyone who has been exposed to a huge traumatic event especially clients within the Traumatic Brain Injury community who can recall all events before and/or after their accident(s). PTSD is defined as "the development of intense anxiety symptoms following exposure to traumatic event of a magnitude outside the normal range, events like this can include, military experience, kidnapping, torture and violence" (Coetzer 2010, p.126). The definition given by the DSM-5 states:

> "PTSD is characterized by the development of symptoms resulting from direct exposure to an extreme traumatic stressor, such as actual or threatened death, serious injury, or other threat to one's physical integrity of another person; or, learning about unexpected or

> violent death, serious harm, or threat of death or injury experienced by a family member or other close associate"

PTSD can occur in clients who have a moderate to severe Traumatic Brain Injury, those who have a mild Traumatic Brain Injury sometimes have post amnesia in which they cannot remember event prior or post injury.

Psychosocial Health

The study *Self-Reported Psychosocial Health Among Adults with Traumatic Brain Injury* was conducted to measure the psychosocial health of Traumatic Brain Injury clients after one year of their accidents. The people that were studied where fifteen years and older and had suffered their brain injuries one, two and/or three years after their injuries. Clients that were chosen for this study had their medical records reviewed and once approved the authors conducting the study were surveyed by the telephone one year post injury. Overall this study showed that there are many clients that have poor psychosocial health post one year from their injuries. The most severely impacted aspects of this are vitally, role limitations at work, school or home due to emotional problems, and social functions as stated within this study (Dikman, McCarthy, Langloi, Selassie, Horner, 2006, p. 959). This study also includes clients who have reported psychological illnesses before their brain injuries like depression, seizures etc. Even after their suffered TBI's they have reported having lower/poorer psychosocial health. Women who have also sustained TBI's also seem to report lower/poorer psychosocial health. Insurance and not having Medicaid access can also lead to lower/poorer psychosocial health since many of the client's needs and/or services will not be met, the socioeconomic status of client can affect rather or not they are covered by their insurance. Overall many of the clients who have sustained their brain injuries and have reached their one year anniversary of their injuries has lower/poorer psychosocial health due to limitations physically, gender, socioeconomic status and insurance

coverage, some that have mental illness before their injuries will also have lower/poorer psychosocial health.

Life Satisfaction, Community Integration & Distress

Life satisfaction, community integration and emotional distress all correlate with one another. After the client's brain injury accidents, they go through rehabilitation in which they are prepared to be integrated in their community, the article *Psychosocial Outcomes after Traumatic Brain Injury: Life Satisfaction, Community Integration and Distress* state that community integration is closely related to emotional distress. Although emotional distress within a TBI client can be caused by psychological and neuropsychological factors that can come into play post injury. Community integration within the Traumatic Brain Injury community includes social participation, social motility, and occupational outcomes as stated within the study (Williams, Rapport, Mills, Hanks, 2014, p. 299). If a client has a positive community integration, then the better/higher their life satisfaction will be. Both life satisfaction and community integration correlate with one another within TBI clients. This study was measured with clients who have sustained their brain injuries one through five years' post injuries, the time difference can also affect emotional well-being and life satisfaction meaning everyone differs.

Employment, Self-Efficacy & Quality of Life

The authors Tsaousides, Warshowsky, Ashman, Cantor, Speilman & Gordon (2009) wrote about the correlation(s) between employment and quality of life within the Traumatic Brain Injury population. They state that those who had the higher income and could obtain and maintain employment rated higher in quality of life satisfaction. One of the main goals within the Traumatic Brain Injury community is to return to work post rehabilitation, especially if their rehabilitation is a success. But this also brings up the question if clients can obtain, maintain

employment and if they can handle that stress. Within another study that was cited within this article was an interview done of two clients who had a traumatic injury, each were asked what their definition of work was, one of the clients stated that if they obtained work then they will not have financial and freedom restrictions, the other client defined this as "finding her place back into society" (Tsaousides, Warshowsky, Ashman, Cantor, Speilman & Gordon, 2009, p.300). For many clients that had suffered a Traumatic Brain Injury it is important for them to regain and go back to their lives they had before their brain injuries. Since their lives have been effected in a traumatic way regaining their employment is one of their main goals, depending on the severity (moderate-severe) of their brain injuries many do not regain their old lives back to the way they used to and start to obtain depressive symptoms and anxiety.

Psychosocial Health & Depression

Within the Traumatic Brain Injury population depression post one year of their accidents is the most prevalent. It is important to assess their psychological needs to decrease depressive symptoms and help them feel more at ease in their situations. If the client is depressed, we can physically see it due to their psychosocial functioning decline. To avoid the client(s) acquiring late-onset depression and chronic depression it is important to create assessments to help clients feel more comfortable and give them the sense of self-expression through the means of art. But with this we must be aware that many of the TBI clients that are clinically depressed have the lack of motivation and will not have the motivation to finish/complete the task at hand. If one creates directives and/or assessments directed to that said clients then we might see change in what the person and the completed task with better an emotional status, if working one on one with in and individual setting. If in a group setting, we can hope to find the clients in a better emotional status.

The study *Relationship between depression and psychosocial functioning after Traumatic Brain Injury* was conducted measures the relationship between depression and psychosocial functioning among Traumatic Brain Injury clients. The measurement was done with clients who had sustained their brain injuries post five years from their accidents. Clients who did not get diagnosed with depression post their accidents had a higher level of psychosocial functioning health the clients who had acquired depression post their accidents. According to the study about twenty-nine percent of clients who did get diagnosed with depression had it resolved within their five-year period, they also had less depressive symptoms and higher psychosocial functioning (Hibbard, Ashman, Spielman, Chun, Charatz, 2004, p. 51). The other clients were depressed in the first and second assessments had both lower psychosocial functioning and a decline in quality of life over time. The clients whose depression does not get resolved when they are newly diagnosed will end up getting late-onset depression that later turns into chronic depression. It is important to intervene and meet the needs to avert this situation happening.

Art Therapy & Depression

Clients with who were diagnosed with depressive symptoms are referred to take art therapy by their physicians. Some clients may also be diagnosed with multiple symptoms such as anxiety, personality disorders just to name a small amount. Few clients are prescribed antidepressants and/or mood stabilizers to help reduce symptoms and are normally on prescribed medication while they attended art therapy sessions. The article *Efficacy of Group Art Therapy on Depressive Symptoms in Adult Heterogeneous Psychiatric Outpatients* explained how the art therapy can be beneficial for adults who have depressive symptoms. It also explains the process and how it like how long each session was and the discussion afterwards and how they encouraged people to speak about their feeling through the artwork. The sessions were about

forty-five up to sixty minutes, the rest of the time was used for discussion, they met every week. Clients used different variety of media, and had a choice of picking the material they wanted to use. The goals that were set for the art sessions were growth, gaining insight, enhancing social skills, self-awareness, creating coping skills, and helping clients re-establish their own identity and confidence. Everyone was encouraged to express how they felt through their artwork. Overall this study that was conducted proved how art therapy can be beneficial to those with depressive/multiple symptoms over a short amount of time. Clients within this setting improved on communication, assertiveness, enjoyment with the use of their media of choice and successfully completed projects that showed personal meaning to the clients (Chandraiah, Ainlay Anand & Avent, 2012).

Art directives can be created for clients that specifically increase self-exploration which increases self-awareness, one approach can be to increase the client's self-perception by exploring life goals and roles, the main goal overall is accept and understand oneself. Self-expression can help clients use colors and symbols when creating art, they can tell or a connect a story to their images to help understand themselves better. Communication is also important to the client since the story of their images or drawing do not have to verbal and can be communicated symbolically. Understanding and explanation when doing art therapy with client's emotions help clients understand and work with their emotions which can lead to a better understanding and give meaning to difficult experiences, the use of catharsis in art work can also help clients feel at ease and a way to help release any strong emotion they currently feel. Integration is the use of creating art from a difficult experience to create distance from trauma or traumatic event as stated by the authors in this article, this can help put emotional and behavioral experiences into a historical perspective and create clarity for the client(s). Symbolic thinking is

the way of creating images or symbols through art to help shape non-verbal experiences, this can serve as a connection between the conscious and unconscious. Creativity can help stimulate the brain especially clients with depression and/or traumatic brain injuries, this can help increase cognitive skills. Sensory stimulation occurs when clients are in the process of making art through art therapy sessions.

We must understand that depressed clients who have sustained a TBI are going me less likely to want to create art that day. Many lack the motivation and self-start to start on their own. But if clients are within a group setting they will most likely want to participate in the art making and sharing process. It is also essential to focus on the clients' strengths to make the art making process a positive experience.

Art Therapy & Anxiety

Art therapy is also used to help reduce anxiety in the general population. Studies have shown the measurements before and creating art work. Clients before creating have high levels of stress, after they create art their stress levels are significantly reduced. The authors Sandmire, Gorham, Rankin, & Grimm (2012) conducted a study of how art making within a thirty-minute time frame helped reduce anxiety level within first year college students. There was a control and an experimental group in which they could create art. In the experimental all had a choice of either coloring in a pre-designed mandala with whatever medium they wanted, rather if it was paint, watercolor, colored pencils and/or markers, they could do a free form painting, collage, working with clay to create a pot or an animal figure of their choice and a drawing, they were also able to socialize with each other. The control group did not have a choice to create art but were able socialize, both groups were not allowed to use to electronic devices. The authors have found that anxiety levels of the art making group were significantly lower than the control group.

But they also state that this might only be temporary since the test given to measure the student's levels of anxiety was given right after the test making and not given again later. This does not limit us to know that art making will not reduce levels of stress and anxiety permanently but if one is in need to reduce stress and anxiety levels especially college students' art making can help (Sandmire, Gorham, Rankin, & Grimm, 2012).

When it comes to the Traumatically Brain Injured some clients do have elevated levels of anxiety. Seeing client's anxiety first hand introducing art making with the directive that was given that session did help reduce the level of anxiety even if it was for a short period. Art therapy is used as a nonverbal tactile and visual manner when it comes to art making, the client can be in a trance like manner when creating art, the product is not what is important to the client but the process of doing it and completing the task is what is most important to the client.

Even if clients were not doing much, some still have elevated levels of anxiety. The art therapy intern's experience during her internship at Head Injury exposed her to various levels of anxiety within several different people. In the morning when clients are coming some do not like waiting around doing nothing when they are waiting for the next session. Instead we gave them something to do which was color a sheet from a drawing book in whatever material they like. This helped them calm down and feel at ease when going to their next session and not having to worry about where they are going next (due to change in cognitive skills many do not know where they should go next and usually forget). This brings the art therapy intern to another study that was found when conducting research. Within this study, the authors Vennet & Serice (2012) wanted to find out if coloring pre-designed mandalas would reduce anxiety symptoms in clients. The authors used three conditions, one was a pre-designed mandala, a plaid design and a free form or blank sheet of paper and wanted to see which one was stress and anxiety relieving. This

experiment was conducted by first measuring the client's baseline anxiety, the they induced anxiety (increased it) with a writing assignment and measured their anxiety afterwards, after they were given one of the three conditions (pre-designed mandala, plaid form or free-form/blank sheet of paper) and their anxiety baseline gets measured again. The conclusion of this study states that coloring a pre-designed mandala can help reduce anxiety symptoms in clients then doing a free from, but they also suggested that coloring the plaid design was also effective in reducing anxiety as well (Vennet & Serice, 2012).

Coloring can be very effective in reducing anxiety symptoms within the Traumatic Brain Injury clients. As stated above, many clients did like coloring sheets to pass time and would sometimes save them for later if they wanted to finish it. But this also depends if the clients can maintain focus on just coloring, many have issues trying to maintain focus even in art therapy session or sometimes even forget they have a coloring sheet they have started unless it is redirected. Overall Traumatic Brain Injury clients do enjoy coloring if they can keep their focus on the task at hand. It is also best to try to incorporate mindfulness techniques like breathing exercises to help calm and relax clients before they start creating artwork as well.

Art Therapy & Post-Traumatic Stress Disorder

Art therapy can be essential in helping create a narrative story with fragmented memories and provide a way of communication with memories that relate to trauma within military war veterans. The case study that is presented within the article *Art Therapy for PTSD and TBI: A senior active duty military service member's therapeutic journey* is a war veteran who sought treatment after seven years of having Post-Traumatic Stress Disorder (PTSD) symptoms and his inability to focus on his tasks. The client seemed to have suffer from a blast related injury during his service in the military and due to the art therapy intern's prior knowledge of the different

types of brain injuries. The art therapy intern had come the conclusion that the client had sustained a “blast related injury” in which he around several explosions near his bunker and lost consciousness with post traumatic amnesia for about thirty-five to forty-five minutes (Walker, Kaimal, Koffman & Degraba, 2016, p. 12). The first art therapy session was related to his vision in which the client kept on seeing a “bloody face” he used that to express what he saw and for the first time he told clinicians about his vision that he had for years. The medium that was used to create his artwork was a mask, he did not know how he felt looking at but finally creating it and seeing it before him said it was very therapeutic, the next directive was suggested by the author(s) in which they brought in a box large enough for the mask so it can “buried”. In a sense the memory was manifested and put to rest which helped the client have less visions of this bloody face and to help him overcome that. The client stated that when he painted his flashbacks and nightmare he would see them less and sometimes not at all. This helped him transfer those fears through the means of art in which they became manifested so he can physically see them (Walker, Kaimal, Koffman & Degraba 2016, p.16).

Within the Traumatic Brain Injury population, Post Traumatic Stress Disorder is not as common with regular clients who had sustained their brain injuries through motor vehicle accidents, falls etc. but this is not limited. TBI clients that have sustained blast related injuries are usually involved in the military, some who are in service and those who are currently not and are veterans. Art therapy is a door way to these clients as a way of creating artwork related to their flashbacks and fears during their time in service. This is also not limited to other TBI clients who have sustained their brain injuries without being in military service. If their accidents where traumatic enough for that said client, then their chances of being diagnosed with Post Traumatic Stress Disorder is high and some of the same symptoms will occur as well. In the example given

by the author(s) of the study as stated above the client most likely had Retrograde Amnesia in which he could remember all events of his traumatic experience within the military. Retrograde Amnesia can occur in regular Traumatic Brain Injury clients who had sustained their injuries through car accidents or falls or whatever the cause may have been. Many fear that the same incident(s) will occur again which can lead to high levels of stress and/or anxiety within clients.

Other Creative Therapies for Traumatic Brain Injury

Art therapy is not the only therapy used to help clients with traumatic brain injuries. There are many other creative therapies to help clients in need, many therapies include music to help increase mood, dance therapy to help clients re-discover their own bodies and regain a new sense of self and interactive metronome therapy to help who want to improve their cognitive skills.

Music Therapy

Music therapy can help increase socialization skills, interaction in therapies sessions and enhance the client's moods. The study had two groups, the control group and experimental group in which they received the music therapy. Each client would rate their own moods on the Face scale which had several stylized faces, the clients would choose which face closely related to how they felt that day. Family member and therapist were also able to measure the client's mood and social skills as well. In some sessions, the therapist asked the clients to play some instruments of how they felt and other sessions were more structured in which the clients played a note on an instrument of their choice on cue, both approaches were followed by a brief discussion of how well the music reflected and supported their feelings. This type of therapy also involved singing and/or playing an instrument depending on the interest of the clients. The control was not assigned music therapy but just the normal therapies they receive. Overall the use of music therapy did help increase in participation in therapy sessions and increase in

socialization skills and improvements in mood other than the control group (Navak, Wheeler, Shiflett, & Agostinelli, 2000).

Dance/Movement Therapy

Dance therapy can be use within the community integration process of Traumatic Brain Injury rehabilitation process. Dance therapy uses kinesthetic movement which incorporates physical- cognitive and psychosocial functioning in one approach. By using dance therapy as an approach within the healing process, both hemispheres of the brain are used simultaneously which can increase bodily kinesthetic movement, visual, sensory and motor reception (Talbot, 2012, p.45). This type of therapy can help clients re-discover themselves, give them an outlet for expression, help them explore their own environments through the means of movement, it can also increase self-esteem, self-image and improve their own limitations. Overall dance therapy improves quality of life and independent functioning among the traumatically brain injured. It also helps clients participate and engage more in groups, gives them a sense of empowerment, and control over their lives (Talbot, 2012, p. 47).

Dance therapy may be very effective with helping clients gain a new sense of self by exploring movements with their bodies. Even if clients have a moderate to severe Traumatic Brain Injury and are wheelchair bound, dance therapy can still help them re-discover movements and increase their self-esteem.

Interactive Metronome Therapy

Metronome therapy can help clients who have cognitive difficulties and complaints after they have sustained a mild, moderate or severe Traumatic Brain Injury through the blast related injury category. Clients that are affected by blast related injuries and cognitive difficulties afterwards are soldiers who were overseas and have a combined diagnoses of Post-Traumatic

Stress Disorder (PTSD). Interactive Metronome (IM) is an operant conditioning system in which the client executes various repeated movements in time with the beat while a computer gives back feedback according to the authors (Nelson, MacDonald, Stall & Pazdan p. 667). There were fifteen one hour sessions in total with clients who had sustained their mild-moderate brain injuries within five years, treatment was done at least three times a week. This study was also incomplete but the authors thought it was important to share their preliminary research thus far. According to the authors they have stated that clients who have received the IM therapy benefited cognitive wise than those who did not. Although some clients that do sustain a mild Traumatic Brain Injury do fully recover and do not have cognitive difficulties, but some clients do not recover fully (Nelson, MacDonald, Stall & Pazdan p. 672). The use of art therapy in clients who were involved in the military and had sustained a mild-moderate Traumatic Brain Injury through the blast-related category combined with Post Traumatic Stress Disorder is highly important in the rehabilitation process. Using art as a way of manifesting their flashbacks and memories is highly therapeutic for the client. But once clients start to have cognitive problems one must turn to several types of therapies. Interactive Metronome therapy is highly effective in helping clients with cognitive difficulties, even though this is only a preliminary study, this shows us that some clients do not recover completely from their mild Traumatic Brain Injuries but that there are distinct types of therapies arising to help these types of clients in need especially if they were war soldiers/veterans.

Art Therapy Directives

Within this section, the art therapy intern will describe different art therapy directives that were found during her research. The art therapy intern's case study client mainly worked with collage and some paint which lead to research on painting and collage. She also decided to

search for different techniques to incorporate within art therapy sessions like found objects and an integration with nature therapy to help reduce symptoms of depression and/or anxiety.

Painting & Collage

The author Sutherland (1999) conducted a case study on a client named "Nancy", she was 63 years old and had multiple medical issues. The client in the article enjoyed painting the most since it was easier for her use. According to the author Sutherland (1999) she was not able to apply enough pressure on the materials like crayons or pastels, thus painting was the easiest since it is a fluid medium that does not require much pressure at all. Each painting that was done during each session was done in paint, each related to her memories of her life, but she did not want to go into depth explaining her art work, the author Sutherland closely observed her during these processes. By the fourth session the client did not want to paint her memories instead she just wanted to let her arm do its thing instead. By session fourteen due to the client's current condition that day and lack of mobility due to surgery the author Sutherland (1999) had brought collage materials for her, she was able to choose the images that were ideal to her and chose a big sized paper. She wanted to fill it up completely with no white showing, the author Sutherland suggested using a smaller size but the client refused, the client also refused to talk about her work. The author overall was very emphatic when it came to her client, which gave her client full control when creating the artwork since the client had claimed she had lost control of her life and body. This gave her a way to express herself through something in which she enjoyed doing. The author Sutherland (1999) introduced the use of collage after the client was not able to physically move. Collage was made easier for the client since she could pick out images of her choice and could be interpreted by her symbolism of how she felt that day (Sutherland, 1999).

The use of collage is essential to the Traumatic Brain Injury community since it is a way of picking images that are meaningful for the clients. Not everyone in this community can draw as effectively so collage comes easiest. Collage can also help reduce symptoms of anxiety within the Traumatic Brain Injury population, since not every client can use their hands effectively to draw something out or they can not apply enough pressure then collage is easy for them.

Collage

The authors Chilton and Scotti (2014) both conducted research on how collage can be used in an art therapy settings to use with any population. Having clients in different populations use collage as their form of medium can help clients feel comfortable especially if they do not feel comfortable with drawing or not have any drawing skills. The use of collage can provide a safe and structured resource in the difficult self-expressive process" according to the authors Chilton & Scotti (2014). This type of media can help clients with self-exploration and make meaningful intrinsic experiences (Chilton & Scotti 2014, p. 170). Using collage as an art directive is a way of taking images, textures or other elements and putting it all together and rework and reconfigure it to create a new piece of art. It is a way of taking different images that have no way correlation with one another and creating meaningful connections with that can promote a positive experience for the clients. The use of collage in the Traumatic Brain Injury population can help clients cognitively by picking out images they see meaningful.

Found Objects

Found objects can be integrated within the art therapy sessions and can be used to create the artwork, afterwards clients can speak about how, when they found the object and why they chose that object to bring into the art therapy session. A study on found objects was conducted to see how clients who ranged from different mental stages can find an object that has some

meaning to them like a memory or something that has sentimental value and transform said object (Camic, Brooker & Neal, 2011). This study also has a table of objects that were categorized by the object that was found and the response that was given by the clients, for example when it came to natural found objects if a client found a leaf they liked their interpretation of that leaf was “hope”, if they found a black gradient to white feather that symbolized “different mental states”. Each object had their own meaning to the clients. From a clinical standpoint, the authors state that introducing founded objects increase engagement, it is an alternative medium, enhance attachment, and enabled new connections (Camic, Brooker & Neal, 2011, p. 155). When it comes to the client’s standpoint many saw found objects as psychological bridge in which clients saw this was a connection with their inner world to an external one, curiosity and enthusiasm which was a positive response to the objects. The clients used their objects as a tool to explore themselves and their problems. Associative experiences where connections to past times to the present. Many objects evoked emotions and identified them, memories, some objects were symbolic to clients, increased greater engagement, and physical response and environmental actions in which clients engaged in finding objects anywhere, this increased their awareness on their surroundings in the outside world (p.157).

Though this directive can be a way of transforming an ordinary object into a work of art some adjustments need to be made. Since clients have distinct levels of severity the art therapist would have to find a variety of objects for the clients to use. Not everyone would be able to do this directive on their own like the clients did within this study unless they all have a mild Traumatic Brain Injury and can move around without the assistance of a wheelchair, walker or cane.

Integration with Nature Therapy

Using nature therapy can help clients with emotional and psychiatric problems, it can help them grow and support the process of rehabilitation. The clients that were within this article/ study had either schizophrenia, Obsessive Compulsive Disorder (OCD), anxiety, and a sense of alienation, some of the clients either had one or several of these deficits. Using nature therapy can help clients relax and feel calm in which it may feel like mediation but surrounded by nature. This can also be integrated into art therapy with doing art therapy outside surrounded by an opened field or by trees depending the type of population you work with. It can also be integrated with having clients find objects within nature so they can use within their artwork. This can lead to discussion as to why the client chose the objects they did and what significance that object had on them (Berger &, Tiry, 2012).

If clients are not used to being outside due to limitation and lack of mobility especially if they are Traumatic Brain Injury clients who are also wheelchair bound, then some adjustments need to be made. Supervision of clients will always be required and many clients will not be able to find objects on their own also many clients have short attention spans so many will most likely lose interest especially if some sort of meditation is involved. This type of therapy would possibly help clients who have sustained a mild brain injury, these types of clients would be able to walk moderately without any external assistance, example and walker, crouches, or cranes. But this is not limited to just mild Traumatic Brain Injury clients. If the facility allows clients to go outside with a supervisor, then this type of therapy can be achieved.

III. Methods

Qualitative Research

A qualitative research method "encompasses several approaches to research that are, in some respects quite different from one another" according to the authors Leedy and Ormrod (2016). In basic terms a qualitative research method is primarily an exploratory research that includes close observation and interviews of a small group setting or an individual. What is most common among qualitative research is that they focus on what happens in a natural setting and involve studying what had occurred in the setting in its complexity (Leedy & Ormord, 2016 p. 133). It is critical for researchers to interpret and understand whatever is going on during their research or observations. When it comes to planning, and designing the qualitative research one must be trained in observation, interview strategies and other forms of collecting data (Leedy & Ormrod, 2016 p.134). Extensive preparation must be made to prepare for the research, during the research, the researcher must know what to look for when conducting observations and collecting data and must be able to find meaningful data within the overloads of data.

In this case, a qualitative research method is used. The art therapy intern carefully observed the client's behavior during the art making sessions. Since the client had a diagnosis of depression the art therapy intern decided to conduct research based on other studies with clients who had depression and a Traumatic Brain Injury. She also developed art therapy directives that are specifically designed to help Traumatic Brain Injury clients reduce depressive and/or anxiety symptoms.

Developing Art Therapy Protocols

Within this section, the art therapy intern will thoroughly explain the development of five art therapy protocols that are specifically designed to help reduce depressive and/or anxiety symptoms within the Traumatic Brain Injury population. Each directive is specifically designed to help increase self-expression, promote relaxation and reduce tension within clients, help them identify their strengths and create a sense of achievement. With the research that was conducted prior the main use of collage, painting, tactile and natural materials is used when creating these five art therapy directives. Painting is a very fluid medium that clients can used easily without using heavy pressure (Sutherland, 1999). The use of collage in art therapy can help clients make meaningful intrinsic experiences. They can take different images and correlate them with one another and promote a positive experience for clients. Collage can also increase self-expression within for clients and is the safest non-threatening form of art especially if the clients are not comfortable with drawing (Chilton and Scotti, 2014). The art therapy interventions that were developed for future Traumatic Brain Injury clients go as follow:

First directive. The directive will consist of creating a collage of positive images for clients who are suffering from depression. The main goal of this directive is to have the client express their current emotions and help them create a positive experience in a non-judgmental place.

Second directive. The second directive will help clients reduce their current stress, promote relaxation and reduce tension. The session will be used in combination with mindfulness techniques, mainly a breathing exercise to help the client relax for a few minutes before they start to create the artwork.

Third directive. This directive will mainly help clients increase their self-expression by writing down their current worries down on paper and putting them in their "worry box."

Fourth directive. This directive will help clients identify their strengths, potential and their capabilities, this directive will also help clients create a sense of empowerment and achievement.

Fifth directive. The last directive will be done a group setting, clients will be coloring a section of a mandala that will be created by the art therapist. Clients will be able to socialize with each other, this can increase their communication skills and increase their social interaction.

For three months, the art therapy intern worked at Long Island Head Injury Association with the adult population. There the art therapy intern worked with four groups in one day, three days a week. Each client had diverse levels of functioning and severity which meant that not everyone was able to self-start their artwork after the directives were explained, this gave the art therapy intern the opportunity to help clients individually. She also worked with someone who was diagnosed with depression and witnessed his depressive episodes first hand. A case study was also conducted on the client which later inspired her to write her thesis.

It is important to create art therapy directives that creative and simple enough so client of all severity can understand and create with ease. Since some clients are diagnosed with depression and/or anxiety may will have a strong lack of motivation and interest, some will have anxious thoughts and not being able to do the artwork. Each directive that was developed uses a combination of mindfulness techniques and varies in medium choices to keep the clients interested in the subject matter.

Setting. Long Island Head Injury Association is an outpatient day program where clients who have sustained a Traumatic Brain Injury go during or after their rehabilitation process. The

clients that go to this day program are adults between the ages twenty through fifty and older. Many clients have diverse levels of function and severity. There are two parts of Head Injury Association, one side is called New Horizons in which low functioning autistic adults attend and the other side holds all the TBI clients. Neither side interfere with the other, everything is separate. The art therapy sessions consist of four groups each an hour long. The group sizes differ each day depending on how many clients go to their art therapy sessions, clients have a choice if they want to attend the art therapy sessions if they like.

Participant. Many clients at head injury have various levels of functioning and severity. Each group was unique and had a mixture of high to moderate levels of functioning and some from moderate to low levels of functioning. Due to the various levels of functioning in each group some of the directives had to be adjusted to make it easier for the clients to understand. The main client, "Dawson" that the art therapy intern worked with frequently two days of the week had moderate to severe TBI. Dawson was also diagnosed with depression after his TBI accident according to his files. Dawson also echolia which is a speech impediment, the repetition of the same word several times. To communicate with Dawson effectively the art therapy intern would ask simple questions in which he would be able to respond easily to. Questions normally revolved around a simple yes or no question. The art therapy intern would also give Dawson positive reinforcement and compliment his art work frequently. Dawson also showed signs of losing focus and interest very quickly, the art therapy intern would normally redirect him back to the task so it can be completed. There would also be times in which he would get frustrated and not finish his artwork because he did not want to. Dawson also had a high interest in nature and liked using natural materials when giving the option of working with them.

Case Study

A case study within the qualitative research method involves an individual, program or event that is studied throughout a period of time. A case study can be conducted to learn more about a poorly understood situation, but this can also show how an individual can change over time by intervention or certain circumstances. The type of data that needs to be collected for the case study include, data about the individual or program or events, observations, interviews, documents, past records, and audiovisual materials according to the authors Leedy & Ormrod (2016, p.135). In case the art therapy intern collected data on the client by reading their charts that were available, conversations with the client and images of their art work. A consent form had to signed by the client before obtaining any information, once the form was signed the art therapy intern documented four sessions, the name of the client was also changed due to confidentiality. Due to the client's schedule change he was not in art therapy sessions any longer, hence the small amount of sessions documented. With permission of the art therapist at the location adjustments were made to have a termination process

VI. Findings

Within this section, the art therapy intern will discuss four to five different art therapy protocols for future Traumatic Brain Injury client(s). Each protocol is specifically designed to help reduce depressive and/or anxiety symptoms for clients who have a diagnosis of depression and/or anxiety or Post Traumatic Stress Disorder with their TBI. The protocols shall also describe method/process, therapeutic goals, materials needed for each directive and the expected outcomes of each process. The art therapy interventions that the art therapy intern will be describing consist of painting, collage, and nature objects/tactile (like leaves, rocks, sand etc.). Mindful techniques shall also be described in correlation of reducing anxiety symptoms as well. Within this section, the art therapy intern will also present a case study example when she worked with the client Dawson at Head Injury Association.

Collage of positive image

This directive is specifically designed to help client(s) who have suffered a Traumatic Brain Injury and who also have a diagnosis of depression. Due to their-depressive symptoms creating art can help the client(s) express their current emotions. Creating a collage can help the clients remember positive memories through the images they choose and provide a safe place to express their emotions.

Methodology/Procedure

Materials. The materials that are going to be used are magazine images of the client's choice, any sized paper they want to use, glue and scissors. Assistance will be available to help client paste images on paper if needed. Collage is mainly used in this art directive since the art

therapy intern believes that the client can find positive images of what they want to help reduce depressive symptoms they are currently feeling.

Process. First, we must prepare the paper and pick out several magazines that the client wants to use, have ready the scissors and glue. Then explain to the client that we are going to create a collage of positive images. The client has a choice of the images they want to use. If the client cannot cut and paste the images due to moderate to severe limitations due to their TBI, then you can cut and paste them but the client must point to where they want the images placed. After the client is done with creating their collage engage them in a discussion as to why they chose the images of their choice. Talk to them about their experience when creating the collage. Ask them why they chose the images they did and if they have any importance to them.

Expected outcome. The client will be able to look through magazine images of their choice. If they are not able to cut and paste them then you can do it for them. During this process, the client will be able to connect to the images they have chosen to create a positive experience for them. The client will be able to discuss the images that they chose and why. After they are done discussing about their they have the choice of creating more collages and turn into a journal. Ask the client what title they want to give their collage. The questions that you want to ask to help them engage in discussion are:

1. What images did you decide to use and why?
2. When you look at these images on your collage how does it make you feel?
3. What title would you give this piece?

Figure 1- “Collage of Positive Images Example”

Drawing with Sand

This art directive is specially designed to help clients who have suffered a mild to moderate Traumatic Brain Injury and who are currently diagnosed with anxiety. Anxiety is the second common diagnosis after depression within the TBI community. The most common type of anxiety disorder is Generalized Anxiety Disorder (GAD) and Social Anxiety Disorder (SAD). Touching the fine sand can be very relaxing for the client when combined with a mindfulness technique and a breathing exercise to help the client feel at ease and reduce stress. In this directive, the client(s) will be using Elmer’s glue to draw and put sand over the glue to create a sand drawing. This can promote relaxation and reduce tension that the client may current feel.

Methodology/Procedure

Materials. The materials that are needed for this directive is plain white paper, assorted colors of fine sand and Elmer's glue. We would also need a sand tray to hold the all the sand when the client shakes off the excess.

Process. First practice a breathing exercise with the client, breathe with them for the first few minutes of the session to help the client relax. This can help create a rapport between the art therapist and client. After the breathing exercise explain to the client that they will be creating a drawing sand. Have them touch the sand so they know how it feels at first. You can demonstrate how to put the glue on the paper plate however they like and then you show them how to put the distinct colors of sand on top of the glue and have them shake off the rest onto a container. It is also important for them know that this sand drawing does not have to look like something, it can be an abstract of whatever they like.

Expected outcomes. The client will be able to practice breathing exercises to help them feel at ease before creating the artwork. Soon after the breathing exercise is done and they are in a relaxed/calm state they will learn how to create a sand drawing with glue and use colors of their own choice. The client shall be able to create the sand art image and engage in a discussion about the artwork with the following questions:

1. What was it like touching the fine sand?
2. What colors did you decide to use and why?
3. How was your overall experience working with this new material?

Figure 2- “Sand Drawing Example”

Box of Worries

This directive is designed to help clients who have suffered a TBI and have been diagnosed with depression. This will take two sessions; the first session will consist of the client decorating the box with tempera paint. The second session will focus on the inside of the box. The client can paint the inside as well and decorate their box how they like. After they have finished decorating the box they will write down what their current worries are and put them in a box. Afterwards you can tell them that a higher power will take care of their worries. This can act as a metaphor for the client and bring a positive experience for them. This is a fantastic way to increase their self-expression in a non-threatening therapeutic place.

Methodology/Procedure

Materials. The materials needed for this directive are a shoe box medium sized, assorted colors of tempera paint, paint brushes, water, paper towels to wipe off any access water or paint, a pencil and pieces of paper to write down their current worries.

Process. First introduce the box to the client and explain to them that this box is going to a place in which they can put their worries in. Have them paint the box how they like with whatever colors they want to use. They are open to paint the inside as well if they choose to. After the paint is dry inside and out have them write what their current worries are. They do not have to tell you what they are currently worrying about if they are not comfortable sharing. Afterwards they start to put their worries in the box after they are done.

Expected outcomes. The client should be able to paint inside and outside their box with their preferred colors. Afterwards they will write down their worries on the pieces of paper provided and put them in the box. Tell them that a higher power will take of their problems for them. Have them engage in discussion with the following question:

1. How does it feel to put your worries in this box?

Figure 3- "Worry Box Example"

A Tree with Natural Materials

This directive can be used in an individual setting with TBI clients of all severities and all levels of functioning. The main goal of this directive is to help identify their strengths, potential and their capabilities. This directive can also create a sense of achievement and empowerment

within the client. The client will write on real leaves with metallic markers what their strengths are, or qualities that make them feel unique are.

Methodology/Procedure

Materials. The materials that are needed for this directive are natural materials (leaves), glue metallic sharpie markers (so the words are visible), and a drawing or cut out of a tree without leaves on paper. Using real leaves can be used a tactile collage piece for the client.

Process. First introduce the natural materials to the client. Tell them that they are going to be writing their personal strengths on the leaves with the metallic markers. After they are done have them place where they want the leaves on the paper.

Expected outcome. The client should be able to write on the leaves what their strengths are with the metallic markers given. If they cannot write on the leaves due to severe limitations because of their Traumatic Brain Injury, then you can write it down for them. Have them glue down the leaves on their tree after they are done writing them. Once they are completely done have them look at their tree and engage them in a conversation about their artwork with the following questions:

1. What words did you use to describe your strengths?
2. How did it feel to complete your tree?
3. Would you add any more positive words to your tree in the future?

Figure 4- “A Tree with Natural Materials Example”

Group Mandala

This directive can be used in a group setting with Traumatic Brain Injury clients of all severities and all levels of functioning**.** The mandala will be created by the therapist and clients can color in a small section of the mandala. This can help increase social interaction and improve social skills among others within the group.

Methodology/Procedure

Materials. The materials needed for this directive is a large drawing of a mandala on a large sheet of paper. The clients can use markers colored pencils, or whatever material they want to use to color the mandala.

Process. First show the clients the large sheet of paper with the mandala drawn on it. Place it on a large circle table and have the coloring materials ready for the clients. Tell them that they are open to using any materials they want to color in the sections of the mandala. You can play some music in the background and have them engage in a conversation with each other when they are coloring.

Expected outcomes. The clients should be able to gather around the circular table and choose the medium they want to use to color in their section of the mandala. They should be able to choose the medium the medium they want to work in and engage in conversation with the other group members. Then engage the clients with the following question(s):

1. How does it feel to see the finished mandala?

Figure 5- "Group Mandala Example"

Case Study Example

In this section, the art therapy intern would like to share part of the case study that was conducted with (Dawson). Dawson was diagnosed with depression after his Traumatic Brain Injury and currently in a day program at Head Injury. The art therapy intern would like to share here how art therapy can beneficial for someone who has suffered a Moderate-Severe Traumatic Brain Injury and how art has helped reduce his current depressive symptoms through the means of collage.

Collage of positive images with Dawson. This directive was an independent study that the art therapy intern had conducted with Dawson. The materials that were used for this directive where colored construction paper, magazine images of his choice, scissors, glue and colored string to hold the pages together. The whole concept of this collage piece with the client was to pick out images out of magazines of his choice and have him choose images that made him feel good. This was created to improve his overall mood and a create/use this directive as a coping mechanism to help reduce depressive symptoms.

Goals. The therapeutic goals for this art therapy directive were to reduce depressive symptoms, improve mood, increase self-expression in a safe place, create/use as a coping mechanism.

Creative process. On this day, Dawson had been seen crying by the art therapist at a party that everyone at the facility was attending, she decided to bring him into the art room where it was quiet, so she had an idea to have him look through magazines to find images to help calm him down. We decided to look through some images in nature magazines of his choice, these are the ones he picked out without stating why till after they were shown to him again a week after to see if he remembers. Soon after he was calm we had decided to make a collage with all the images he had chosen and turn it into a book, and whenever he had a depressive episode the art therapy intern showed him the images within the book to help reduce depressive symptoms and improve his mood. These where the first set of images he had chosen, as you can see they are all animals some of the images he found funny the albino kangaroo.

Figure 6- “Collage of Animals” Figure 7- “Collage of Animals in Winter”

Dawson also picked out three new images. One of the images were trees with the sun shining through them, a person in blue suit and another person working on two computers. With these images, the art therapy intern asked why he picked them since they are very diverse, he stated that the trees stand tall and that the sun shines through them, on the other image he said that the guy on the computers was a hard worker and that the other guy in blue was his favorite color.

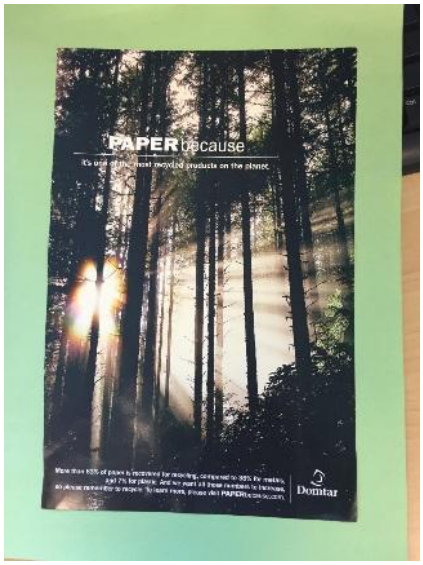

Figure 8- “People at Work” Figure 9- “Tall Trees”

After a week, Dawson decided to put another image within his book of happy images. The art therapy intern asked him why he picked this image and he said that it reminded him of babies. The art therapy intern asked him if he had any children and he said yes, he stated a name that was not within his files, the art therapy intern decided not to question it since she did not want to bring up any painful memories that will lead him to another depressive episode since it looked like he was getting emotional about the situation.

Figure 10- “Baby Crib”

Interpretation. Having Dawson picking out these images of his choice the art therapy intern notices that there was a significant improvement on his mood. The art therapy intern noticed his change and decrease in depressive symptoms when creating the collages through our time at the internship. When he was feeling depressed the art therapy intern would show him the completed the book and ask him why he chose the images he did. At times, he could not remember so to give him a positive experience, the art therapy intern gave him a positive memento for each figure he had chosen. In figure six, the art therapy intern stated that bear symbolized his strength, the swans were a symbol of his family and the kangaroo was his sense

of humor. In figures eight and nine, the person on the computer was hard at work and that the trees stand tall and the sun shines right through them as stated by Dawson. The art therapy intern stated that he too is a hard worker and the trees stand tall just like him. As for the baby crib, figure ten Dawson had chosen, the art therapy intern decided not to ask him as to why he chose the image. She noticed that he was getting upset after asking the question if he had any children of his own. It may suggest that he misses his family and children. Overall Dawson's mood had improved and eventually he ended up taking the book home. It was rare for Dawson take his artwork home since there would be many occasions he did not finish his artwork and showed no interest to it. Every time he showed signs of his depressive symptoms she would show him the book reminded him of why he chose the images he did.

V. Discussion

Art therapy can be used a way to help reduce Depressive and Anxiety symptoms within client(s) who have suffered a Traumatic Brain Injury as discussed throughout the research that has been conducted. The art therapy protocols that were created may suggest in reducing Depressive symptoms and Anxiety within the Traumatic Brain Injury population. The protocols that were developed where inspired by the internship. Each protocol was specifically modified to fit the needs of the clients' suffering from Depression and/or Anxiety and can be used in a group setting or working with an individual. Even though these protocols are in the making they have yet to be conducted with Traumatic Brain Injury clients suffering from depression and/or anxiety. Extensive research must be conducted to see the effectiveness or ineffectiveness of the protocols created.

Limitations of Research

The major limitations of the art therapy protocols that were developed for future Traumatic Brain Injury clients is that these protocols were not actually conducted during the internship. Instead it was developed for future Traumatic Brain Injury clients and is specifically targeted on reducing depressive symptoms and decrease Anxiety. Though with the art therapy intern's experience working one on one with a client who has Depression the art therapy intern still requires more experience working in the field and developing effective protocols. A partial case study is also presented since this protocol/directive was created by the art therapy intern. The full case study that was conducted did not have sufficient information to be used nor was relative to the research being conducted. The qualitative research method was used was in combination of the art therapy interns prior experience and knowledge when working at her internship. These protocols may suggest in reducing depressive symptoms and anxiety but the

further research and an in-depth case study is necessary to see if the protocols that were developed are useful for this specific population.

Conclusion

In conclusion Depression and Anxiety are the most common diagnoses within the Traumatic Brain Injury population. About thirty-three percent of the TBI population have a diagnosis of depression post one year after their accident(s). With dramatic changes on the client's bodies many have a change in life roles. It is like their lives have come to a complete halt depending on their severity. The lack of social participation and life roles can decrease their life satisfaction which can also lead to depression. It is highly important to keep the clients engaged in socialization in their families and day programs to prevent social isolation. This can lead to an increase in life satisfaction and improve quality life within TBI clients.

When it comes to Anxiety, about sixty percent of the TBI population are diagnosed with Anxiety, clients who have lower functioning levels develop co-occurring Anxiety. The most common Anxiety disorder is Generalized Anxiety Disorder (GAD) but clients can suffer from diverse types of anxiety as stated within the thesis like Panic Disorder, Obsessive Compulsive Disorder, Phobias, and Social Anxiety Disorder. Anxiety is mostly common within clients who have sustained a Mild Traumatic Brain Injury and who can go back to their lives normally but still have some types of complications, some of the complications include minor speech impediments, and moderate to poor cognitive skills. Many who suffer from a Mild TBI and go back into the workforce develop anxiety due to having thoughts of not being able to handle/keep their new job and the stress about it often.

When it comes to Post Traumatic Stress Disorder (PTSD) a small amount of the TBI population suffer from this stressor. PTSD is mainly associated with military veterans. Clients

who are in the military and were exposed to intense explosions can suffer from a Mild TBI, a blast related injury by mechanism. The pressure of the explosives can affect the brain severely. But conducting research on TBI clients the art therapy intern had found out that PTSD is not just limited to military war veterans. We tend to have this notion of connecting PTSD with war veterans but now having a clear sense of understanding we know that this is not limited just to them. If the TBI client suffered from a traumatic accident and can recall events before and/or after the event, the client can have flashbacks of those exact moments and can be paralyzed in fear. This gives us a new outlook on PTSD and how it is not just limited to military veterans. Having clients create art in art therapy sessions is a way of manifesting the client's flashback through creative means.

In many cases, some clients have a double diagnosis of Depression and Anxiety. This can severely impact the quality of life amongst the TBI population. Studies have shown that a positive community integration with the TBI population can lead to a higher/better life satisfaction. The main goal for the TBI population returning to the work force and returning to their normal lives after their accident but many clients are not able to do so. Going back into the workforce for someone who has suffered a TBI is their way of regaining their place back into society, but since many cannot they suffer from depression and anxiety. Some worry about not doing the hobbies they love, some worry about how they are going to maintain financially stable if they cannot go back to work or maintain a job.

The questions within this thesis remain, how does art therapy impact quality of life of an individual with TBI who has depression and anxiety and how can the use of paint, collage, nature materials and mindfulness techniques be used to help reduce depressive and/or anxiety symptoms within Traumatic Brain Injury clients? Art therapy is a used a modality to have clients

regain control of their lives and express themselves in a positive non-judgmental environment. Clients participate in social activities in many day programs tailored specifically for them. The art therapy directives that were developed for future TBI clients may increase their self-expression, promote relaxation, have the clients feel self-empowerment and promote a sense of achievement within clients. Working in groups can also increase their social interaction and communication skills.

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