BRAIN INJURY WORKSHOPS—A MANUAL TO HELP INCREASE SOCIALIZATION IN THOSE WITH ACQUIRED BRAIN INJURIES.

by

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ABSTRACT

The aim of this project is to provide behaviour therapist with empirically based workshops that will be used to administer therapy to clients who have moderate to severe acquired brain injuries (ABI). The research showed that treatments featuring Acceptance Commitment Therapy (ACT) and Cognitive Behaviour Therapy (CBT) were effective in treating those with ABI. Therefore, these workshops have been tailored to have a strong focus on directing outpatients towards acceptance of their current situation and living according to their values; in accordance with ACT. There was also a focus on behavioural activation and activity scheduling in the method of CBT. Workshops were created in both worksheet and PowerPoint formats. This way the materials are easy to distribute, replicate, and be modify as needed. The workshops are also interactive: they contain reflection questions and discussion points that behaviour therapist can use to guide discussions and deliver therapy and guidance. The resulting set of workshops were created in the expectation that through psychoeducation and the use of behavioural techniques learned, outpatients with brain injuries would be encouraged to seek social interaction. The workshops aim to help to reinforce a more structured means for seeking out social contact. Though the workshops have been completed, they have not been piloted yet. Therefore, the discussion section notes the potential outcomes and limitations.
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Chapter I: Introduction

A study on the epidemiology of acquired brain injury (ABI) in Finland show that the prevalence of ABI there is 183 in 100 000 or 0.18% of the population (Lannoo, Brusselmans, Van Eynde, Van Laere, & Stevens, 2004). To arrive at this conclusion, Lannoo et al. (2004) had 121 general practitioners submit data of all their patients that had ABI and ran statistical analysis on the data collected. To input this statistic into the Canadian population, with more than 35 000 000 people, 0.18% would mean that 6.4 million people potentially have ABI in Canada (CBC News, 2013). Assessing the characteristics of ABI survivors in Lannoo et al. (2004), it was found that the causes of these ABIs in order of most prevalent are as follows; traumatic brain injuries (TBI) at 39%, strokes at 34%, and other medical complications such as aneurysms, tumours, anoxic brain damage at 27%.

A study about the epidemiology of TBI reports that in 2006, there were approximately 57 million living people worldwide who have been hospitalized due to TBI (Langlois, Rutland-Brown, & Wald, 2006). In addition, Langlois et al. (2006) note that approximately 1.4 million TBIs occur annually in America. However, these numbers alone are not a comprehensive reflection of the impact that ABI has in the world; the 1.4 million TBI’s do not take into account those treated in non-hospitals, outpatient programmes, military facilities, and those who have ABI but did not seek care (Langlois et al., 2006).

In light of the prevalence of ABI it is crucial to discuss forms of treatment. Turner-Stokes’ (2008) review of treatment effectives shows that day programmes are among the most effective formats of treatment for those with ABI; day programmes have shown to especially result in an increase in employment and productivity. Other examples of treatment include specialist inpatient MD rehabilitation for increasing autonomy, inpatient behavioural modification programmes for increasing social skills and behaviour, and community-based post-acute neurobehavioural programmes for improved social activities (Turner-Stokes, 2008).

Consistent of the outcomes of some of the aforementioned treatment formats, Fraas, Balz, and DeGrauw (2007), conclude that one of the highest priorities for rehabilitation for those with ABI is social integration. Social integration is positively correlated with higher overall life satisfaction; specifically, Fraas et al. (2007) disclosed that community-based treatments at day programs are integral in the process of social integration.

West Park Health Centre, a hospital in the west end of Toronto, has an outpatient brain injury day program for those with moderate to severe brain injuries ("Adult Day Program," 2015); the Day Program accepts those with behavioural issues and provides a social and educational environment. An important feature of West Park Health Centre’s ABI Day Program is frequent community outings; the focus is to enhance the current adaptive strengths of the participants and teach them new skills with a focus on social support and skills training ("Adult Day Program," 2015).

Project Statement

The purpose of this project is primarily to provide the staff at West Park Health Centre’s ABI Day Program with additional resources that will help the therapeutic process through teaching skills and information that are relevant social integration. The resulting manual will also be available to be used by other ABI day programs that have a similar focus. In addition, there is
a literature review incorporated to provide updated information on the subject matter and to help support the rationale for the format of the manual.

In summary, this manual is designed to aid in the increase of life satisfaction among adults with ABI through an increase in social interaction for those with ABI. The workshops in this manual are to be added to the West Park ABI Day Program’s existing collection of workshops. Furthermore, this manual is optimally to be used in the context of ABI day programs formats, like the one at West Park Health Centre.

Overview

In this paper, there is a literature review on the subject of ABI discussing the prevalence of ABI. The literature review also covers the effects of ABI; issues of importance regarding ABI; and the educational and therapeutic foci of available treatments for ABI. In this process, elements of cognitive behavioral therapy (CBT) and elements of acceptance commitment therapy (ACT) are identified as suitable treatments that help to increasing social integration and overall quality of life. In the method section, there are details on the construction and format of the workshops; an overview of the population and a rationale for the chosen format. Lastly in the discussion section, strengths and limitations are discussed as well as recommendations for the direction future research.
Chapter II: Literature Review

Impact of ABI

Acquired brain injury (ABI): an injury to the brain caused by a traumatic external force or internal biological dysfunctions is a global public health issue (Calvete & Lopez de Arroyabe, 2012). According to Chan, Parmenter, and Stancilffe (2009), there are approximately 5.3 million people in the US who live with complications related to ABI. Not only is ABI a prevalent issue, but it also wide spread in its effects. ABI affects the immediate physical and mental health of those with ABI, but it also affects the relationships and quality of life of the caregivers. Spouses, family members, and friends, are common examples of caregivers. When someone has an acquired brain injury, their relationships with the people that take care of them changes. The relationships change from having a possibility mutual support, to a necessity of unequal dependency wherein the caregiver must give more than they will receive. Though most families are resilient for the first six months following the injury (Oddy, Humphrey, & Uttley, 1978), some families consider taking care of someone with a brain injury as a burden. In addition, the prevalence of ABI also often requires the support of the government healthcare (Chan et al., 2009). In order to assess and care for survivors of ABI, teams of doctors, nurses, physiotherapists, and rehabilitation therapists are needed, in many cases. The healthcare system plays a large role in the rehabilitation of ABI patients. Moreover, the healthcare support that is necessary for these individuals is usually essential for several years and sometimes their entire lives.

People with ABI have been reported to have a variety of issues resulting from their injuries such as depression, anxiety disorders, mood disorders, psychological distress, social isolation, academic problems, and limited mobility (Chan et al., 2009; Simpson & Tate, 2002). Some common forms of psychological distress can lead to suicidal ideation. In fact, it is reported that individuals with ABI are at a higher risk of suicide than those without brain injuries (Chan et al., 2009). Chan et al. (2009) also disclosed that 19% of those with brain injury attempt suicide within the first two and half years. Also, Chan et al. (2009), highlighted two major behavioural areas that are affected: crime and violent behaviour are linked; and sexually inappropriate speech and offending. In addition to this, there is a report of common drug and alcohol use for young males post injury (Ponsford, Whelan-Goodinson, & Bahar-Fuchs 2007).

Overall, there are many issues that ensue as a result of ABI. However, as reviewed below the most prominent issue is arguably that the quality of life for these individuals has been negatively affected (Fraas et al., 2007).

Quality of Life

An increased quality of life for clients seems to be the main goal of many effective treatments. Various articles regarding the treatment of ABI have identified that social isolation and social support seem to be major impediments to high quality of life post-injury. Two variables that are consistently tied to a lower quality of life for people with ABI are social isolation, and a lack of mobility (Forslund, Roe, Sigurdardottir, & Andelic, 2013). According to Forslund et al. (2013) there are four categories positively related to health related quality of life (HRQL); these findings are consistent with all current literature. These four categories are: social supports, physical functioning, doing productive things, and perceived mental health.

Oddy et al. (1978) conducted a study with 54 acquired brain injury patients and 35 patients with traumatic limb fractures without brain injury in order to investigate the possibilities
of recovery after a closed head injury. A series of interviews were conducted with close relatives of the patients. Oddy et al. (1978) also found that work, leisure activities, and social contact were the most heavily affected areas in the lives of those with ABI. Jumisko, Lexell, and Söderberg (2005) conducted a study wherein 12 participants were interviewed; each participant had lived with an ABI for 4-13 years and was interviewed twice. Each interview inquired about day-to-day life both before and after the injury to ensure a comprehensive account of events. After studying the manuscripts from the interviews, Jumiskio et al. (2005) discovered that self-concept was a major theme among adults with brain injuries. A study conducted by Douglas (2013) aimed to discover how persons with brain injuries defined themselves as people post-injury. Twenty-five participants with brain injuries were interviewed and disclosed that self-concept was indeed a major theme (Douglas, 2013). The data on self-conceptualization was further analyzed and the findings showed that within the overarching theme of self-conceptualization, there were three subthemes: who am I; how do I feel about myself; and, staying connected. In this third theme: staying connected. Douglas (2013) asserted that that having social support and social engagement are both signs of positive psychological functioning.

Seeking to discover the connections and causes of the distress in the lives of those with ABI as well as what hinders them from an acceptable level of quality of life, Williams, Rapport, Millis, and Hanks (2014), conducted an archival study using longitudinal data from 253 ABI patients with mild complicated to severe brain injuries. The results indicated that there are three concepts associated with the effective rehabilitation of patients with ABI: community integration, quality of life, and emotional distress. Common targets in rehabilitation for patients with ABI are to increase community integration and quality of life and to decrease emotional distress (Williams et al. 2014). These goals have been shown to be interrelated by other studies and again confirmed to be interrelated by this study. However, Williams et al. (2014) discovered, though many patients were receiving objective progress towards these goals, many of them did not report that their treatments were successful. It has been suggested that in order for the rehabilitation goals of these patients to be comprehensive and acceptable for patients with ABI, the goals must be derived from the patients themselves (Williams et al., 2014). In other words, goals of targeting community integration, quality of life, and emotional distress are effective, but to be the most effective there needs to be a stronger emphasis on working towards the goals outlined by patient individually.

Throughout the literature, the main theme has been that social support is a key issue for the recovery and rehabilitation of patients with brain injury. For example, Fraas et al. (2007) investigated the effectiveness of an existing day program that is based upon social support: SteppingStones. SteppingStones is a brain injury day program that exists for people with brain injuries after they have already gone through the rehabilitation process (e.g., public healthcare). The main goal of Fraas et al. was to identify how well the SteppingStones program met the long-term needs of its members who were ABI survivors. Ylvisaker and Feeney (as cited in Fraas et al., 2007) claimed that, in this program there is a shift from the disease or medical mindset to one of and also allowed for members to participate in numerous activities so that their independence might increase. (Fraas et al., 2007).

In determining whether the effectiveness of this program was successful, Fraas et al. (2007) interviewed 33 participants of the program, 39 student volunteers, and 16 professionally employed caregivers at the program. Separate surveys were created and administered. The clinician’s survey had 30 items and was called the Clinician Validation of the Literature (CVL).
The participant survey was a 44-item survey called the Perception of Programme Effectiveness (PPPE). The questions in each survey had ten main categories each asking about the necessity of the following components: creative needs, communication education, transportation needs, vocational needs, social needs, cognitive needs, recreational needs, physical needs, activities of daily living (ADLs), and emotional needs. Both surveys were questionnaires with a 5-point Likert scale used to rate specific items of the program in order to determine the necessity of each facet of the day program.

When looking at the results of Fraas et al.’s (2007) study, social support was shown to be the number one necessity across caregivers, participants, and students. In other words, the findings show that the social support that is provided by SteppingStones is seen as the most valuable part of the experience by both the caregivers, and those with ABI. Taking a closer look at the philosophy of SteppingStones, several major core principles are identified. According to Ben-Yishay and Prigatano (1990 as cited in Kangas & McDonald, 2011), there are six defining features of what is considered to be a comprehensive day treatment program. A comprehensive day treatment should consist of a cognitive and interpersonal focus, an interdisciplinary approach, acceptance and awareness of social skill concerns, involvement of significant others, inclusion of vocational concerns, and outcome measurement (Fraas, et al., (2007). In conclusion, the SteppingStones program and the study completed by Fraas et al. (2007) seem to be a model to follow when it comes to creating a social program that promotes social integration, and takes care of the long term needs of the persons with brain injury.

Effective Forms of Therapy

Regarding the educational aspect of rehabilitation, the aforementioned day program includes a cognitive and interpersonal foci. A study by Hsieh et al. (2012) explored the impact of motivational interviewing (MI) as a means of preparing individuals with brain injury for CBT: a form of therapy that has been shown to be effective for treating anxiety and depression in those with brain injuries according to Soo, Tate & Lane-Brown (2011). Through CBT, patients learn behavioural and cognitive coping strategies that help them to regulate both behaviours and emotions. However, Cuijpers, van Straten, Andersson, and van Oppen (2008) have found that CBT has the highest dropout rate out of all the other psychotherapies when used for treating depression and anxiety. Cuijpers et al. (2008), in defence of CBT, made the caveat that perhaps the reason that CBT had a higher dropout rate that other therapies was because there was homework required in order for treatment to be effective. They drew this conclusion by comparing CBT with the therapy with the lowest dropout rate: problem solving therapy. A major difference between CBT and problem solving therapy is that in problem solving therapy, the clients do not have homework and the problems are worked on as they experience them. This is also done without clients having to learn a new paradigm; in problem solving therapy therapist try to understand the client’s point of view and work with it. Whereas in CBT, a new paradigm to work within is provided. (Cuijpers et al., 2008).

To combat the high CBT dropout rate, Hsieh et al. (2012) have attempted to provide a brief motivational interviewing (MI) program with their client, before moving forward with CBT. The design of the treatment was a single-case experimental design (SCED). The setup entailed three weeks of MI sessions that were followed by nine sessions of CBT. The treatment was shown to be very effective overall. According to the Hospital Anxiety and Depression Scale* (HADS), the client’s level of depression and anxiety were at a moderate level during baseline and dropped to mild during the MI phase. These ratings further dropped to a normal
level by the end of treatment. In addition, his rating on the Subjective Units of Depression Scale also decreased as the therapy went on Hsieh et al. (2012).

Although the treatment seemed successful, Hsieh et al.’s (2012) study did not necessarily show that CBT with MI is better than CBT alone. There were many confounding variables that prevented Hsieh et al. (2012) from drawing a causal relationship between the MI + CBT and the reduction of depressive symptoms. For example, a limitation of this study is that there was no control group or reversal design. It is likely that a reversal design was not possible because the teaching component of CBT cannot be unlearned.

Khan-Bourne and Brown (2010) reviewed the impact of CBT on depression in those with ABI; they supported the idea that CBT has been and can be effective in reducing the symptoms of depression. Specifically, there is mention of the use of behavioural activation as an effective first stage of therapy (Jacobson et al., 1996 as cited in Khan-Bourne & Brown, 2010). Behavioural activation is a process in which clients seek to systematically fill their days with enjoyable activities. These activities help to improve clients’ moods and are often considered highly rewarding. Khan-Bourne and Brown (2010) also declared that pure behavioural approaches might not succeed in decreasing depression. CBT is an approach that aims to break the cycle of depression through the changing of behaviour and thinking. This therapy involves clients learning techniques such as thought catching, Socratic questioning, and keeping mood diaries. The goal of these techniques is cognitive restructuring (Wright, Basco, & Thase (2006) and the aim of these techniques is to refocus focus clients on their goals post-injury as opposed to measuring themselves against their life pre-injury.

However, it is reported that CBT should be modified to meet the needs of those with brain injuries (Khan-Bourne & Brown, 2010). Due to the nature of brain injuries, there may be impairments such as forgetfulness and a decrease in attention span. In order to account for these changes, Khan-Bourne and Brown (2010) suggest adapting CBT to be more client-centered by ascertaining the scope of their function, presenting problems in clearly delineated manner, identifying the antecedents and activating situations, incorporating the impact of events preceding the injury, and indicating the individual’s assessment of the brain injury. Further recommendations for those with cognitive difficulties include the use of memory aids, shorter lengths of sessions, the involvement of at least one family member, and refocusing during off-task moments (Khan-Bourne & Brown, 2010).

In comparison, an alternate form of treatment would be Acceptance Commitment Therapy. In 2003, Bedard et al. published a study on the use of mindfulness to increase the quality of life for individuals with ABI. The treatment was piloted with 10 individuals with ABI, and took place across 12-weekly sessions. There was also a control group of three individuals with ABI. The main focus of the treatment consisted of activities such as group discussions, insight meditations, breathing exercises, and guided visualization. The goal of treatment was to allow clients to think about their disability with acceptance and enable them move past beliefs that limited them. In order to measure the outcome, the Short Form Health Survey (SF-36) was used in order to measure both physical health and mental health components along with other standardized measures such as the Beck Depression Inventory (DBI-II) (Ware & Kosiniski, as cited in Bedard et al., 2003). At the end of the sessions, the results showed significant improvement in the area of mental health, but no improvement in physical health. Depression scores were almost reduced to half of what was being presented at baseline. Lastly, the BDI-II showed that the mindfulness treatment showed improvements in the cognitive-affective area but
virtually no improvement on physical health. To further validate this study, a one-year follow-up was conducted by Bedard et al. (2005) that showed that the improvements were maintained.

Kangas and McDonald (2011) compared ACT to CBT proposing that ACT model is more conducive for meaningful and relevant change in the lives of people with mild to moderate impairments as result of brain injury. According to Wright et al. (2006), the two main tenants of CBT are that cognitions influence emotional and behavioural reactions and behaviours can affect a person’s cognitions and emotions. This is different from the ACT therapeutic approach in which has three main foci: acceptance of what a person has and cannot change; chosen valued life directions; and taken action to pursue a meaningful life (Batten, 2011). Kangas and McDonald (2015) assert that though CBT has shown effectiveness in reducing both mood symptomologies and stress, CBT yields variable results regarding its effect on emotional issues. Regarding the underlying tenants and techniques that CBT employs, it is noted that certain techniques, particularly cognitive restructuring (CR), require high cognitive functioning that is more difficult for certain people with brain injuries to grasp due to the nature of the injury (Mansell, 2008). Briefly, CR is the process in which a person challenges his negative thoughts and beliefs and attempts to replace those thoughts with more rational, positive thoughts and beliefs. Naturally, this process is both time consuming and requires a high level of reasoning. In most CBT treatments for those with brain injuries, the CR aspect had to be modified in order to be properly learned and understood (Kangas & McDonald, 2011). CR’s need for modification may be seen as weakness of CBT. In addition, it was demonstrated that CR had a very limited additive effect when paired with behavioural techniques across multiple populations (Longmore & Worrell, 2007, as cited in Kangas and McDonald, 2011). ACT also has components of it that require a meta-cognitive level of functioning (e.g., mindfulness) and so this may also serve as a limitation in its use with clients who have ABI. Though cognitive process are involved part of ACT, the main advantage of ACT, when compared to CBT, is that in ACT there is no use of CR. While in CBT, using CR requires time effort to challenge negative thoughts and replace them, the emphasis in ACT is on functionality and moving towards values and goals (Batten, 2011).

In determining what would be the most appropriate treatment to help increase socialization and quality of life, there are a few feasible options: CBT, ACT. CBT has shown effectiveness in across multiple populations and mental health issues; though for ABI particularly, it may require a level cognitive functioning that is not attainable. ACT, in contrast, may prove to be the more readily adaptable and useful form of treatment for those with ABI. ACT does not forgo the use of cognitive exertion that may be difficult for those with ABI, but the therapeutic goal of ACT is not on change but on acceptance. Both therapies have strengths that should be utilized in treatment and weaknesses that should be adapted for treatment.

Relevance of Literature to Project

As mentioned previously, there are two promising treatments for those ABI: CBT and ACT (Kangas & McDonald, 2011). Both treatments are behavioural and can be used to decrease depression and anxiety, and also increase socialization. However, it should be noted that for those with ABI, CBT requires simplification of the CR component; and, the current size of ACT’s evidence base concerning populations with ABI is currently limited (Kangas & McDonald, 2011). In addressing these limitations, this project aims to adapt both therapies to suit those with ABI and incorporate components of each therapy into workshops. Due to the
strengths and demonstrated effectiveness of both CBT and ACT, it is expected that this project will meet the intended outcomes.

Furthermore, studies show strong positive correlations between quality of life and community integration; and quality of life and mobility (Forslund, 2013). Chosen treatment targets of this project address quality of life via decreasing depression and anxiety, and via teaching and encouraging socialization. However, this project leaves mobility as an unaddressed treatment target. Therefore, this stresses the need for a multidisciplinary team in a rehabilitation setting; to provide a comprehensive treatment. Again, the goal of this project is to help people with ABI obtain or maintain a higher quality of life through increased socialization and decreased depression and anxiety.
Chapter II: Method

Setting
The workshops will take place at West Park Health Centre’s ABI Day Program; and, will be facilitated by the behaviourally trained facilitators who run the program. The setting is a specially designed program space provided by West Park Health Centre. It is a room that is wheelchair assessable and has several laptop computers that are kept in a storage cupboard inside the room for client and staff use. There is also an HDMI digital projector and projector screen. The space also has tables and chairs that comfortable seat the outpatients.

Materials
Materials needed for these workshops include an LCD projector, a projector screen, a computer with Microsoft Office, tables, chairs, pens and pencils for writing answers to questions, printed worksheets, and the PowerPoint files that contain the slideshow format of the workshops.

Participants
The main participants of the workshops will be the outpatients that attend West Park Health Centre’s ABI Day Program. Participants will ultimately be included or excluded based upon the discretion of the ABI Day Program coordinator and facilitators. However general participation will be based on established eligibility criteria. The general inclusion or exclusion of participants into the ABI Day Program are based on referrals from the Toronto ABI Network. Furthermore, these referrals are managed by the program coordinator as well as by Cota: a community-based organization that supports adults with cognitive health and mental challenges to thrive in their communities. Other inclusion criteria set by The Day Program state that participants can be either male or female, and must be a) over the age of 17; b) have an acquired brain injury that is moderate to severe; c) be medically stable; d) be currently living in or preparing to return to the community; e) and have a family physician. One important feature to note is that West Park’s ABI Day Program is that it accepts clients with behavioural issues.

Though the use of the workshops is designed primarily for West Park’s ABI Day Program, the materials should be suitable for other ABI day programs as well. The workshops are intended to be provided to those with moderate to severe brain injuries and the workshops should be delivered by behaviour therapist.

Consent
The consent to participate in the workshops is covered as part of the general consent to participate in the ABI Day Program provided by West Park Health Centre. For other ABI day programs, informed consent for participants will need to be obtained according to the guidelines and regulations of the particular organization.

Design
During each workshop session there should be three to six participants in attendance to the workshops and two to three facilitators leading the workshops so as to maintain a 1:3 facilitator to client ratio.

The social skills integration workshops in this manual are available in two different formats: printable worksheets and projectable digital sideshows (PowerPoint presentations). The worksheets and slideshows can both be used in conjunction with one another or independently of one another. The rationale for using these two formats is to provide versatility for the facilitators and for the outpatients. Beyond versatility, the digital slideshows allow for a better visual
experience that outpatients with visual and/or auditory impairments may appreciate. In addition, the digital slideshows allow for a presentation method that is easier to follow for those with limited use of the hands. It may not be convenient for such persons to turn the pages of the paper copies of the workshop. In addition, the paper copies serve as a useful form of workshop presentation because it allows people with capable mobility the freedom to take notes and answer questions by hand. These printed workshops can be taken home by the participants and kept for future reference.

Each workshop is to be approximately two hours in duration and is to be spread across two separate sessions. There should be one hour allotted per session and there should be a maximum of one session per day. Furthermore, there should only be one workshop to be completed each month and sessions would take place once or twice a week. The reasoning behind such a large time gap between workshops is to allow for application and discussion of the learned materials before a new concept or subject is taught. Upon completion of two one hour sessions, there is to be a third follow-up session to summarize and review the material previously covered. To summarize, there are a total of three session: the first two to cover the material, the third to review the material.

Workshops at West Park Health Centre will be guided by the day program facilitators. They will use the PowerPoint presentations and the worksheets to guide discussion and teach lessons. Each worksheet and PowerPoint presentation has both educational content and reflection questions. Going from the beginning to the end of any workshop in the manual, facilitators and participants will find that reflection questions are placed intermittently throughout the teaching. To elaborate, the reflection questions are used to pause and review the material and cause participants to understand what was taught prior or to prepare participants for information that will be taught directly after the question.

As mentioned in the literature review, treatments were seen to be more effective when individualized for the client (Khan-Bourne & Brown, 2010). Therefore, it is highly recommended that whoever is leading the workshops review the material at least a day in advance to modify the workshops according to the needs of their clients.

Chapter IV: Results

There are currently no treatment results because the workshops have not yet been implemented. Refer to the appendices to view the workshops.

Chapter V: Discussion

Strengths

Current strengths of this project include that the workshops were created based on two empirically supported therapies: CBT and ACT. In addition, the therapeutic focus of the manual is social integration; which is also an empirically supported theme in increasing quality of life (Forslund, 2014). Another strength of this manual is that the workshops are simplified and may be more easily understood by people with moderate to severe brain injuries. Lastly, the manual utilizes a widely used, versatile, and assessable method of presentation; this method can be adapted by the facilitators of the workshops in order to match client needs (Klemm, 2007).
Limitations

Arguably the largest limitation is the lack of trail data to assess the effectiveness and usefulness of this project. Ideally, research and statistical analysis would conducted to determine the efficacy of the workshops that were created using pre and post measures. However, due to time constraints these trails were not possible. Other limitations include, a lack of standardization, though the workshops all contain the same content, the method in which they are conducted depends upon the facilitators of each day program. To elaborate, the pacing of the workshops can differ vastly from facilitator to facilitator and the level of training can differ from day program to day program.

Multilevel Challenges to Service Implementation

Client level. A common challenge when working with those with ABI is modifying tasks that can accommodate the multiple of cognitive and physical impairments clients may have. For instance, among several clients participating in a workshop, one may not be able to hear and another not able to speak. This creates barriers when it comes to social interaction. In order to overcome this barrier, it is important to have enough staff to keep the clients engaged as well have materials that are visually large enough to read. It is also important that the volume of the behaviour therapist is loud and clear enough for those with hearing impairments to follow along and for those with visual impairments to be positioned in which they can see the slide show.

Program level. One factor that affects implementation, on a program level, includes the variability in the facilitation of the workshops. There is no standardized way to teach the workshops; the lack of standardization may cause further variability in the results. Another factor on the program level is that funding may not be adequate to afford an appropriate number of staff to assist those with more severe disabilities during workshop facilitation. There are often clients with severe disabilities and these clients may require one-on-one assistance depending on the task. It is also important for workshops to be run at an adaptable pace to match the specific clientele. The pace must be slow enough that the clients can follow along and fast enough to cover the necessary material.

Organization level. Regarding the challenges on the organizational level, provision of staffing to continue on the work of updating workshops is limited. West Park’s ABI Day Program often has students join for a few months at a time. It may be possible to use them to continue the work of updating and revising the content of old workshops. A secondary organizational issue concerns the amount of workshops already in place. At West Park Health Centre’s ABI Day Program, there are 18 workshops that have been created for the same purpose as the workshops in this manual. Participants will only go through a total of six workshops during their time at the Day Program. There is currently no standard for which workshops must be taught. Therefore, it is possible that these workshops in this manual may not be implemented during the duration of a client’s term at the Day Program.

Societal level. On the societal level, there is not enough awareness about brain injury and mental health in the general population (Swift & Wilson, 2001). In order for true community integration to be made possible, organizations like special interest-groups, churches, volunteering centers, businesses are going to need to be prepared to welcome those with disabilities as part of the community. For this to happen, resources need to be put into raising awareness and making accessibility for persons with disabilities more than just a law. Accessibility should be an integral part of the construction of buildings as well as communities.
Implications for the Behavioural Psychology Field

There is currently a strong presence of behavioural psychology in the field of ABI; there is a large range of different effective behavioural treatments and techniques that have been implemented across different behaviours (Heinicke & Carr, 2014). This is likely due popularity of CBT for the treatment of a variety of issues: depression, anxiety, and personality disorders. The aforementioned issues may not be directly caused by ABI, but these disorders are commonly comorbid with ABI (Garrelfs, Donker-Cools, Wind, & Frings-Dresen, 2015). In addition, because cognition often decreases in people with ABI, behavioural treatments are still effective apart from the use of cognitive restructuring (Cattelani, Zettin, & Zoccolotti, 2010). ACT is another notable behavioural based therapy that is also becoming more renowned for its success in the same areas of treatment (Soo et al., 2011).

The creation of this manual contributes another format of and variation of behavioural therapy to be studied and examined. After the trails are run, future studies can learn from the strengths and limitations of this project. This manual adds to the wide and expanding application of behavioural techniques in the psychological field by working towards a form of therapy that is specifically catered to those with ABI. In the same way that Christopher Fairburn et al. (2009) designed a transdiagnostic manual for treating eating disorders. This may be a step towards creating a transdiagnostic manual for treating ABI.

Recommendations for Future Research

It is recommend that more research should be conducted to determine, more fully, what the efficacy of ACT is in treating clients with ABI. In addition, a meta-analysis should be run to determine which specific components both CBT and ACT are most applicable to populations with ABI. The meta-analysis should focus on aspects of CBT and ACT that increase quality of life, and decrease depression and anxiety. Lastly, with the information from the meta-analysis, an ABI therapy module should be developed with that has only the most effective components of CBT and ACT. After the creation of this modified therapy module, research should be done to confirm its effectiveness and to further develop a standardized treatment for those with ABI.
References


Soo, C., Tate, R. L., & Lane-Brown, A. (2011). A Systematic Review of Acceptance and Commitment Therapy (ACT) for Managing Anxiety: Applicability for People with Acquired Brain Injury?. *Brain Impairment, 12*(01), 54-70. doi: 10.1375/brim.12.1.54


Appendices

Appendix A: Workshop Satisfaction Survey

Workshop Survey:

1. Learned something helpful.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

2. The workshop was easy enough to understand.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

3. The words were easy to read.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Comments:

________________________________________________________________________

________________________________________________________________________

Appendix B: CBT Anxiety Work Leader Edition SAMPLE
Anxiety Workshop

The Goals
After this workshop, you should be able to

Part I
- Define anxiety
- Know some symptoms of anxiety
- Understand the causes of anxiety
- Learn about different types of anxiety disorders

Part II
- Learn some tools to help you fight anxiety

What is anxiety? What does anxiety look like?

Anxiety can be defined as the unpleasant state of inner disturbance as a result of the _______ expectation of something bad happening in the future. Anxiety displays itself through unrealistic fears of situations or objects, overestimating risk and danger, underestimating ability to handle situations, and repeated patterns of avoidance.

What is the difference between anxiety and fear?

The difference between fear and anxiety is that fear is based on _____ perceived threats. Sometimes fear can help you survive, anxiety usually makes it harder to thrive.

What are some ways that anxiety has affected you negatively? What are some ways that fear has affected you positively? What are some ways your body can experience anxiety?

How your body may experience anxiety:
- Feelings of panic, fear, and uneasiness, problems sleeping, cold or sweaty hands and/or feet, shortness of breath, heavy or uneven heart beats, jitters, dry mouth, numbness or tingling in the hands or feet, nausea, muscle tension, dizziness

Do you experience any of these symptoms when you go through anxiety?
Who goes through anxiety?

The truth is, everyone experiences anxiety to one degree or another. In fact, anxiety disorders are very common. One in four people will experience an anxiety disorder at some stage of their life; And about 44% of all those with brain injuries experience some type of anxiety disorder long-term. And almost all those with brain injuries experience anxiety disorders throughout the first year after their injury.

What do you think causes anxiety?

Biology
Some people are born with or develop (through a brain injury) an imbalance in certain chemicals in their brains. Their brains are just more likely to be in an over active state.

Experiences
Others have experienced traumatic past experiences leading them to associate similar settings with the trauma they have experienced. Here, the anticipation of another traumatic event triggers the anxiety.
Common Anxiety Disorders

While most of people don’t struggle with anxiety to the point where it’s considered a disorder, here are some common examples of anxiety disorders. If you struggle with anxiety in these ways, it doesn’t mean that you’ve done something wrong, but it does mean that you may need more help getting through it than most people. This is okay.

GAD
Panic Disorder
PTSD
OCD

GAD
Generalized Anxiety Disorder, or GAD, is an anxiety disorder that affects about 5% of the population. People with GAD worry uncontrollably about daily life events and activities. They often experience uncomfortable physical symptoms, including fatigue and sore muscles, and they can also have trouble sleeping and concentrating.

Panic Disorder
People with panic disorder face a very severe form of anxiety that is very acute and crippling. It is characterized by an intense fear of dying, going crazy, or something horrific happening. Panic attacks have an unexpected and sudden onset and usually peak within 10 minutes.

A panic attack may include anxiety about being in a situation where escape is difficult (such as being in a crowd or on a bus). A person who has panic disorder often lives in fear of having another panic attack, and may be afraid to be away from home or far from medical help.
PTSD

PTSD stands for Post Traumatic Stress Disorder. PTSD is an anxiety disorder that can develop after someone has experienced or witnessed a major trauma.

Some symptom that are unique to PTSD:

- Upsetting memories about the event: repeated vivid images about the trauma.
- Nightmares about the trauma
- Reliving the trauma
- Intense anxiety when reminded of the trauma

Self-help for PTSD includes strategies such as (visit anxietybc.com for more details)

- Breathing exercises
- Progressive Muscle Relaxation
- Focusing on the present and describe the present
- Do things you enjoy

OCD

OCD or obsessive compulsive disorder works in two parts. Obsessions, or unshakable thoughts that cause anxiety, and compulsions, which are specific habits that help a person get rid of their anxiety. These habits can be very harmful or time consuming to a person with OCD, but to them it is less harmful than the anxiety caused by their obsessions.

- Obsessions are unwanted and disturbing thoughts, images, or impulses that suddenly pop into the mind and cause a lot of anxiety or distress.
- Compulsions are deliberate behaviours (e.g. washing, checking, ordering) or mental acts (e.g. praying, counting, repeating phrases) that are carried out to reduce the anxiety caused by the obsessions.
Coping and Recovery Strategies

CBT
Psychologist Aaron T. Beck has put together a very effective form of therapy called cognitive behaviour therapy. It is based on two main ideas regarding our emotions.
1. What we think will shape how we feel and act.
2. How we act will shape what we think and feel.

Out of thinking, feeling, and acting, which one do you think is the hardest to control? Have you ever woken up and just felt terrible without knowing why? Or just woken up and felt great for reasons unknown? Emotions are very unpredictable and change on us without warning. This is why cognitive behaviour therapy or, CBT for short, is effective. Through CBT we can have better control of our emotions through monitoring and changing how we think and how we act.

Disclaimer: This next part of the workshop is based on Cognitive Behavior Therapy. But, this should not be seen as a professional Cognitive Behaviour Therapy session. See this more as an introduction or preview of CBT.

So, there are two handouts here that we can use in order to help us. One of them is The Big Six Cognitive Errors. Going through this list of cognitive errors, we will learn the main patterns of thought that lead us to feeling either anxious or depressed.

After this we can look at the next handout which is the thought change record. This handout can be used to take our real life situations, where we face anxiety or depression, and assess our thoughts critically in order to change our emotions.

This method has been helpful for many people and will hopefully help you too. The more you practice the easier and more natural it will become.
Relaxation

Another very useful tool for dealing with anxiety is called progressive muscle relaxation. Progressive muscle relaxation can help you gain control over your anxiety and over how tense your muscles are. In order to gain the deepest relaxation and a full range of motion, it is suggested that you stretch and massaging your muscles in addition to practicing the relaxation techniques.

Lastly, another aid in muscle relaxation is using calming mental images while you practice. For example, while you’re tensing your shoulders, imagine that you’re wringing out a wet dish rag. As you, relax your shoulders, imagine the dish rag untwisting and shaking it out. While your arms are loose and hanging by your sides, just imagine water dripping of your fingertips like droplets from a melting ice cube.

Like the Thought Change Record, Progressive Muscle Relaxation is a discipline that must be practiced.
# Appendix C: Thought Change Record Example Handout

**Thought Change Record: Example Situation**

<table>
<thead>
<tr>
<th>Situation</th>
<th>Automatic Thought(s)</th>
<th>Emotion(s)</th>
<th>Rational Response</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I sent a friend a message, and expect a quick response. The message went unread, according to my expectations.</td>
<td>a. Maybe I have done something to offend my friend. Maybe my friend doesn’t like me.</td>
<td>a. sad, anxious, disappointed</td>
<td>a. Personalization (a lack of a response does not necessarily mean hostility). Selective Abstraction (I don’t know the reason why my friend didn’t respond, I shouldn’t apply my own meaning to it). b. My friend could have been busy or may be she didn’t see the message.</td>
<td>a.</td>
</tr>
</tbody>
</table>
## Appendix D: Blank Thought Change Record Handout

<table>
<thead>
<tr>
<th>Situation</th>
<th>Automatic Thought(s)</th>
<th>Emotion(s)</th>
<th>Rational Response</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Describe</strong></td>
<td>a. Actual event leading to unpleasant emotions or b. Stream of thoughts leading to unpleasant emotion or c. Unpleasant physiological sensations</td>
<td>a. Write automatic thought(s) that preceded emotion(s)</td>
<td>a. Specify sad, angry, anxious, etc. b. Rate degree of emotion, 1%-100%</td>
<td>a. Identify cognitive errors (use Big 5x Cognitive Errors Handout) b. Write rational response to automatic thought(s) c. Rate belief in rational response, 0%-100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Anxiety Workshop
The Goals

- Define anxiety
- Know some symptoms of anxiety
- Understand the causes of anxiety
- Learn about different types of anxiety disorders
- Learn some tools to help you fight anxiety
What is Anxiety?

What is Anxiety?

- The unpleasant state of inner disturbance as a result of the unrealistic expectation of something bad happening in the future.

What is the Difference Between Anxiety and Fear?

- The difference between fear and anxiety is that fear is based on real perceived threats. Sometimes fear can help you survive, anxiety usually makes it harder to thrive.
Your Experience of Anxiety

Discussion

What are some ways that anxiety has affected you negatively?

What are some ways that fear has affected you positively?

What are some ways your body can experience anxiety?
## Your Experience of Anxiety

### How you may experience anxiety

<table>
<thead>
<tr>
<th>Hot flashes</th>
<th>Jitters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweating</td>
<td>A dry mouth</td>
</tr>
<tr>
<td>Problems sleeping</td>
<td>Muscle tension</td>
</tr>
<tr>
<td>Shortness of breath</td>
<td>Dizziness</td>
</tr>
<tr>
<td>Rapid or uneven heartbeats</td>
<td>Tingling</td>
</tr>
<tr>
<td>Nausea</td>
<td>Frequent urination</td>
</tr>
</tbody>
</table>
Common Anxiety Disorders

GAD (Generalized Anxiety Disorder)

Panic Disorder (a.k.a. Panic Disorder)

PTSD (Post Traumatic Stress Disorder)

OCD (Obsessive Compulsive Disorder)
Coping Strategies

Get Professional Help

- If you have anxiety attacks that stop your daily activities more than three times a month, it is recommended that you seek professional help.

Review Your Thoughts

- Psychologist Aaron Beck has put together a method of reviewing your thoughts critically in order help people cope with anxiety.

Relaxation Techniques

- By guiding your body in relaxation, you can decrease your anxiety. You can’t be anxious and relaxed at the same time.
CBT

Psychologist Aaron T. Beck has put together a very effective form of therapy called cognitive behaviour therapy. Over the years, it turned out to be the most effective form of therapy for treating anxiety and depression. It is based on two main ideas regarding our emotions.

1. What we think will shape how we feel and act.
2. How we act will shape what we think and feel.

Out of your thoughts, feelings, and actions which is the hardest to control?
Review Your Thoughts Critically

- The handout that you have is called a Thought Change Record
- You can use it to systematically and critically assess your thoughts and emotions.
- Go through the example provided
- Try it on the blank chart with your own situations
- Though this method is often very helpful in reducing anxiety it is not always a guarantee in every situation.
- The more you practice the easier and more natural it will become.
Relaxation Control Exercise

- **Progressive Muscle Relaxation** is a method to help you gain control over your muscle tension.
- It can help you learn to relax when you're feeling anxious and help reduce anxiety.
- In addition to progressive muscle relaxation you may want to stretch and massage muscles to gain maximum relaxation.
- Using calming mental images is also helpful.
  - e.g. as you tighten your muscles imagine that you are wringing out a wet dish rag. As you relax imagine the dish rag loosen and shake it out.
  - Let the tension drip off on to the floor like ice melting slowly.
- Practice makes perfect.
Relaxation Control Exercise

- Using calming mental images is also helpful
  - e.g. as you tighten your muscles imagine that you are wringing out a wet dish rag. As you relax imagine the dish rag loosen and shake it out.
  - Let the tension drip off on to the floor like ice melting slowly.

- Practice makes perfect