A Facilitator’s Manual for a Cooking Program
to Aid Individuals with an Acquired Brain Injury

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The procedures in this staff training manual are meant to be used by agency staff, as part of the
broader services they provide, or under supervisor of agency staff.
Dedication
This thesis is dedicated to all my closest family and friends.
Thank you for your encouragement, kindness, inspiration, motivation, and most of all love.
Because of you I learned to work hard even in bad times and be proud of what I have achieved.
Abstract

The purpose of the study was to create a facilitator’s manual for a cooking program to aid individuals with an acquired brain injury. Empirical findings from the literature supported how a user-friendly and well-organized manual can assist in the implementation of rehabilitation intervention strategies. After the researcher consulted with agency, supplementary information from various resources was gathered, organized, and incorporated in the manual. The organized structure of the manual can lead to an effective use of time, which is beneficial for individuals diagnosed with acquired brain injuries. The manual followed quality assurance, allowed the facilitator to stay on track, and ensured that essential information did not get omitted from the program. A facilitator’s feedback survey was developed to evaluate two facilitators’ satisfaction of the manual. It was hypothesized that a focused, user-friendly, and well-structured manual may aid with the implementation of treatment strategies by a professional in the field of acquired or traumatic brain injuries. The results from feedback surveys affirmed the manual was visually appealing and appropriate, well-organized, and relevant to the clientele of the agency. The manual was also considered user-friendly when locating resources within the manual. The facilitators gave verbal feedback to make few modifications, which were incorporated into the final draft of the manual. Overall, based on the results of the surveys and the facilitators’ verbal feedback, the manual was deemed beneficial to the clientele and agency. A limitation brought on by time constraints is that this study lacked an empirical evaluation to test if the manual could improve cooking skills of participants. As a future recommendation, once the manual has been implemented, an evaluation needs to be obtained from the staff and/or clients to ensure the manual was implemented efficiently.
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# Table of Contents

Dedication.......................................................................................................................... ii  
Abstract .............................................................................................................................. iii  
Acknowledgements .......................................................................................................... iv  
List of Figures .................................................................................................................... vii  
Chapter I: Introduction ................................................................................................... 1  
  Rationale ......................................................................................................................... 1  
  Overview ......................................................................................................................... 2  
Chapter II: Literature Review .......................................................................................... 4  
  Overview of Brain Injuries .......................................................................................... 4  
    Acquired brain injury (ABI). .................................................................................... 4  
    Traumatic brain injury (TBI). .................................................................................. 5  
  Rationale for a Manual ................................................................................................. 6  
    Importance of manualized therapy. ....................................................................... 6  
    Controversies of manualized therapy. .................................................................. 6  
    Components that comprise an effective manual. ................................................. 7  
  How Manuals Can Assist Individuals with Brain Injuries ....................................... 8  
    Aiding skill deficits. ................................................................................................. 8  
      Physical. .................................................................................................................. 8  
      Cognitive. ............................................................................................................... 9  
      Psychosocial. ......................................................................................................... 9  
    Incorporating manuals into rehabilitation. ............................................................ 10  
  How Manuals Can Assist Facilitators ........................................................................ 11  
  Summary ....................................................................................................................... 12  
Chapter III: Method ....................................................................................................... 13  
  Settings ......................................................................................................................... 13  
    Agency ..................................................................................................................... 13  
    Kitchen ..................................................................................................................... 13  
  Facilitator ..................................................................................................................... 13  
  Group Participants ..................................................................................................... 13  
  Consent ......................................................................................................................... 13  
  Materials ....................................................................................................................... 13  
    Kitchen ..................................................................................................................... 13  
    Common area. .......................................................................................................... 13  
    Facilitator’s manual. ............................................................................................... 14
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handouts.</td>
<td>14</td>
</tr>
<tr>
<td>Activity sheets.</td>
<td>14</td>
</tr>
<tr>
<td>Recipes.</td>
<td>14</td>
</tr>
<tr>
<td>Session structure.</td>
<td>14</td>
</tr>
<tr>
<td>Participant resource manual.</td>
<td>15</td>
</tr>
<tr>
<td>Handouts.</td>
<td>15</td>
</tr>
<tr>
<td>Activity sheets.</td>
<td>15</td>
</tr>
<tr>
<td>Summary.</td>
<td>15</td>
</tr>
<tr>
<td>Measures</td>
<td>15</td>
</tr>
<tr>
<td>Procedures.</td>
<td>15</td>
</tr>
<tr>
<td>Overview.</td>
<td>15</td>
</tr>
<tr>
<td>Interactive component.</td>
<td>16</td>
</tr>
<tr>
<td>Cooking component.</td>
<td>16</td>
</tr>
<tr>
<td>Chapter IV: Results.</td>
<td>18</td>
</tr>
<tr>
<td>Facilitator’s Manual</td>
<td>18</td>
</tr>
<tr>
<td>Facilitator’s Feedback Survey</td>
<td>18</td>
</tr>
<tr>
<td>Chapter V: Conclusion/Discussion</td>
<td>20</td>
</tr>
<tr>
<td>Overview</td>
<td>20</td>
</tr>
<tr>
<td>Strengths</td>
<td>20</td>
</tr>
<tr>
<td>Limitations</td>
<td>20</td>
</tr>
<tr>
<td>Multilevel Challenges to Manual Implementation.</td>
<td>21</td>
</tr>
<tr>
<td>Client level.</td>
<td>21</td>
</tr>
<tr>
<td>Program level.</td>
<td>21</td>
</tr>
<tr>
<td>Agency level.</td>
<td>21</td>
</tr>
<tr>
<td>Societal level.</td>
<td>21</td>
</tr>
<tr>
<td>Contributions to Behavioural Psychology Field</td>
<td>21</td>
</tr>
<tr>
<td>Recommendations for Future Research</td>
<td>22</td>
</tr>
<tr>
<td>References</td>
<td>23</td>
</tr>
<tr>
<td>Appendix A</td>
<td>26</td>
</tr>
<tr>
<td>Description of the educational topics, learning objectives, and weekly activities</td>
<td>26</td>
</tr>
<tr>
<td>Appendix B</td>
<td>28</td>
</tr>
<tr>
<td>Facilitator’s feedback survey</td>
<td>28</td>
</tr>
</tbody>
</table>
List of Figures

Figure 1. Facilitator A’s Feedback Survey ........................................18
Figure 2. Facilitator B’s Feedback Survey ........................................19
Chapter I: Introduction

Within Canada alone over one million individuals are currently living with the effects of an acquired brain injury (ABI; Brain Injury Canada, 2014). Several sources stated that an acquired brain injury can be defined as an injury to the brain which is not congenital, degenerative, hereditary, or induced by birth trauma (Brain Injury Association of America [BIAA], 2014; Brain Injury Canada, 2014; Northern Brain Injury Association [NBIA], 2014a). NBIA (2014a) elaborated indicating there are six primary causes of an ABI; these causes are stroke, anoxia, infection, tumor, surgery, and physical trauma. A traumatic brain injury (TBI) is also an injury to the brain; however, it differs from an ABI as it is an alteration in brain functioning due to an external force (BIAA, 2014; Brain Injury Canada, 2014; NBIA, 2014a). Brain Injury Canada (2014) noted that each year approximately 50,000 Canadians are diagnosed with an ABI and reported incidences are on the rise. North America Brain Injury Society (NABIS; 2014) reported that of all the types of injuries, brain injuries are of the most likely to result in death or permanent disability. Brain injuries take a significant financial toll on all parties involved, including medical systems across the world. The cumulative financial cost of all brain injuries in Canada annually costs medical systems over 1,000,000 dollars at the time of injury and is estimated to be larger than 12.7 billion dollars per year (NBIA, 2014b). Although costs for treatments are high, NBIA (2014b) maintained that an untreated brain injury can often lead to self-medication through the use of substances, such as drugs and alcohol. NBIA (2014b) affirmed that 90% of all brain injury cases could have been prevented through education because the only known cure for a brain injury to date is prevention. Therefore the importance of treatment is high as it can aid individuals with brain injuries with proper treatment rather than the individual self-medicating.

During the recovery process, individuals who have been diagnosed with brain injuries are often referred to rehabilitation for education and to aid with their deficits in functioning. During rehabilitation, members of an interdisciplinary team work with the client to improve the cognitive, physical, and psychosocial skills that were affected by the ABI. Cognitive, physical, and psychosocial impairments can lead to permanent or temporary changes in an individual’s functioning; an individual may experience problems with life skills, independence, and amalgamation into the community post-injury (NBIA, 2014c). Once an individual achieves a certain level of recovery, there is the option to receive outpatient therapy. Outpatient therapy consists of vocational and community rehabilitation. The goal of vocational rehabilitation is to provide an opportunity for the individual to return to a working environment that incorporates the client’s physical, cognitive, and emotional deficits. In addition to the latter, community rehabilitation focuses on assisting individuals with everyday life skills, building their independence, and social re-integration into the community.

Brands, Bouwens, Gregório, Stapert, and van Heugten (2013) stated that rehabilitation programs should attempt to rebuild or restructure clients’ cognitions, emotions, and behaviours. Brands et al. (2013) stated that by teaching compensatory strategies and social skills, while targeting cognitive, emotional, and behavioural problems, it can lead to more control over emotional reactions and enhance self-efficacy. Clinical professionals are responsible to ensure a client-focused rehabilitation that is well organized and efficiently timed while adhering to the client’s needs. A well-organized rehabilitation program follows a structured set of activities and time frame, which can increase the effectiveness of the rehabilitation group.

Rationale

In the past 20 years, manual-based therapies have grown in popularity within the
literature, as they have been shown to be effective in clinical treatments (Goldstein, Kemp, Leff, & Lochman, 2013). Galovski, Blain, Mott, Elwood and Houle (2012) asserted that manualized therapies are being used more frequently in services, such as community care settings. Manuals can be utilized for a wide range of interventions or therapies. They are most effective when the content clearly addresses the issues that are presented in the group. Manuals can provide structure and organization to a novice facilitator and can also be a useful tool as a reminder or guide for an experienced facilitator. Manual-based therapies allow for a structured and time-limited approach as it is easier to train and supervise clients and clinical professionals (Wilson, 1998). Carroll and Nuro (2002) affirmed that when manual-based therapies are well structured, they can be used as guidelines to implement effective treatment techniques. If a manual is created in a user-friendly and organized design there is a higher potential for that manual to be accepted and adapted within the clinical field compared to unorganized manual.

A facilitator’s manual was created to help implement an effective cooking rehabilitation group. The manual provided the facilitator with relevant information in the format of written resource handouts as, compared to the sharing of information with the group orally. The manual consisted of guided notes for each the individual session. The facilitator and clients followed the same guided notes as this added more structure to the current rehabilitation group. The interactive components of the cooking manual allowed the participants to participate in direct experience, resulting in beneficial practice effect for group participants. While the manualized rehabilitation group was implemented by a facilitator, a manual was created for the participants as a reference throughout the group sessions. The resource manual assisted the participants as it allowed the materials learned during group to be generalized at home.

It is hypothesized that a focused, user-friendly, and well-structured manual may aid with the implementation of treatment strategies by a professional in the field of acquired or traumatic brain injuries. Through the development of a manual, a facilitator can aim to run an effective rehabilitation program to teach cooking skills to individuals with ABIs. The organized structure and effective use of time will make the cooking rehabilitation group beneficial for individuals diagnosed with ABIs as it follows quality assurance, allows the facilitator to stay on track, and ensures that essential information does not get omitted.

Overview

The facilitator’s manual was divided into 10 sections. Each section represents one session, with each session consisting of an educational topic, an educational activity, and a learning objective. A participant’s manual was created as an additional resource to be paired with the facilitator’s manual. The resource manual was given to the participants to use throughout the duration of the rehabilitation group. Once the manual was completed, a feedback survey was provided to each facilitator to evaluate the user’s satisfaction of the manual. The results of the feedback survey were taken into consideration and the manual was adjusted accordingly.

Following the introduction of the thesis, the literature review compared, contrasted, and evaluated the current research literature as well as additional theoretical articles and books related to the thesis topic. The literature review provided an overview of brain injury, rationale for the use of a facilitator’s manual, as well as the effectiveness of manuals for both the participants and the facilitator. The method section identified and described the settings, participants, materials, procedures, and measures of the sessions and manual. The results section discussed the outcomes of the manual through the evaluation of data. The final chapter concluded the thesis as it discussed and summarized the importance of the creation of the
manual, the strengths and the limitations of the manual, and the contribution of the manual to the behavioural psychology field.
Overview of Brain Injuries

Acquired brain injury (ABI).

Brain Injury Canada (2014) stated that the annual occurrence of ABIs within Canada occurs at a rate greater than all the known cases of breast cancer, HIV/AIDS, multiple sclerosis, and spinal cord injury combined. An ABI can be described as, “an injury to the brain, which is not hereditary, congenital, or degenerative” (Brain Injury Canada, 2014, para. 1). NBIA (2014a) elaborated by stating there are six main causes of an ABI. The first cause is classified as a stroke, which can occur by having a blocked or ruptured artery. Anoxia refers to a lack of oxygen within the brain and is another cause of an ABI (NBIA, 2014a). An infection within the brain, another cause of an ABI, can damage the cells of the brain and alter their ability to function. An ABI can also result from a tumor, which can cause compression of the brain’s tissue and lead to neural malfunctioning. ABIs can be a rare side-effect of brain surgery; however, there are unavoidable circumstances where brain tissue needs to be removed. The final cause of an ABI is due to a physical trauma, which, will be discussed further in the next section of the literature review. Although the causes of an ABI are important when determining the functional outcome of the brain following injury, Middleton (2008) showed that the age of the individual and the stage of the brain’s development are critical variables when determining the degree of vulnerability to injury. Other related factors that help predict the outcome of the injury include the presence of a coma, the length and depth of the coma, and if the individual experiences post-traumatic amnesia (Middleton, 2008).

Additional complications can arise that are not always determined by predictors of an ABI. NABIS (2014) acknowledged that an ABI can cause physical, cognitive, behavioural, and emotional deficits. These impairments may be temporary or permanent and can range from circumscribed to severe throughout the duration of the recovery process. Individuals may also lack awareness of their post-injury impairments and their consequences, such as their lack of ability to function at certain tasks that they were once able to before the injury. Smeets et al. (2014) examined awareness of post-injury deficits in 93 outpatients with ABIs. The patients were asked to complete an array of clinical assessments that tested their self-awareness after their brain injury. These assessments focused on the patients’ understanding of their competency, motivation, and performance on a variety of motor/sensory, cognitive, and behavioural/affective activities. After completing the assessments, their significant others and clinicians were asked to complete the same assessment. The scores for the significant others’ and clinicians’ tests were compared to the participants’ scores and discrepancy values were created. Based on the participants’ discrepancy score, each individual was placed into one of three awareness groups: under-estimation, good estimation, and over-estimation. The results indicated 30% of the sampled participants under-estimated their deficits awareness, 38% of participants accurately estimated their awareness, and 32% of the participants over-estimated. That being said, 62% of the sample participants were not accurately aware of their own deficits. The results of the study are concerning in the clinical field as many individuals are unaware of their own deficits. Further a lack of education can affect a client’s awareness and their ability to assess their own deficits accurately. This is concerning as individuals with brain injuries may overestimate their own competencies and awareness of their deficits. If individuals with brain injuries attempt to complete tasks that they think they are capable of due to their over estimations, when in reality they cannot, they are at risk of injuring themselves further.

In conclusion, NBIA (2014c) affirmed that each hour, 20 Canadians are affected by the
silent epidemic of brain injuries. Therefore, an increase in educational resources on the topic of ABI may result in greater awareness of the impairment within society, as well as allowing ABI patients to become more conscious of their own deficits.

**Traumatic brain injury (TBI).**

Vos et al. (2012) explained that TBI is among one of the most recurrent neurological disorders. TBI differs from an ABI as the injury is caused by an external force and not at a cellular level. Parikh, Koch, and Narayan (2007) explain that a TBI is a physical injury to brain tissue, which leads to temporary or permanent brain function impairments. Additionally, Vos et al. (2012) confirmed that a TBI is caused by an abrupt impact trauma to the head. Parikh et al. (2007) reported the main causes of TBI are due to motor vehicular or transportation-associated collisions, falls, assaults, and sports activities. Parikh et al. (2007) also stated that TBIs are commonly categorized into one of two categories based on the type of injury: an open injury or a closed injury. An open injury involves a blunt force or penetration to the scalp and skull that leaves an open wound; an example being a bullet wound or laceration due to a sharp object. A closed injury occurs when the head is struck directly, against an object, or shaken violently; yet, there is no open wound present.

Like ABIs, TBIs can vary in severity and can be classified as mild, moderate or severe based on the score of the Glasgow Coma Scale. Parikh et al. (2007) described that 80% of all TBIs are classified as mild, while more recent literature reported 90% of all TBI cases are found within the mild category (Vos et al., 2012). Both ABIs and TBIs can lead to cognitive, physical, or psychosocial changes (NBIA, 2014b). NBIA (2014c) stated that physical effects of a brain injury are changes in the body’s functioning. Some of the physical changes include, but are not limited to, a lack of energy, chronic pain, and change in senses, appetite, body temperature, speech, co-ordination, etc. The cognitive effects of a brain injury are changes in thinking abilities (NBIA, 2014c). Some of the cognitive changes include, but are not limited to, difficulty focusing, trouble understanding, memory problems, and difficulty with executive functions, such as organizing, reasoning, decision making, and serial-tasking. The psychosocial effects of a brain injury are changes in emotions and social behaviour (NBIA, 2014c). Some of the psychosocial changes include, but are not limited to, depression, anxiety, impulsivity, relationship problems, use of substances, reduced ability to work and changes in self-identity. In addition to the latter, TBIs can impair self-awareness and perception which can, in turn, affect an individual’s quality of life. If individuals with brain injuries are unaware that there are physical, cognitive, or psychosocial changes, they overestimate their capabilities and are at risk of injuring themselves further.

A Neurobehavioural Functioning Inventory (NFI) and Diagnostic and Statistical Manual of Mental Disorders IV (DSM-IV) were used to assess the prevalence and symptom rates of depression after a traumatic brain injury (American Psychiatric Association, 1994 as cited in Kreutzer, Seel, Gourley, 2000; Kreutzer et al., 1996). The authors selected 37 specific questions from the NFI that were diagnostically relevant to Major Depressive Disorder (MDD) symptoms based on the DSM IV’s diagnostic criteria. The participants answered the 37 Likert-styled questions based on the frequency that a problem occurred: (1) never, (2) sometimes, (3) often, or (4) always. A domain was deemed problematic if the participant reported the problem to occur often or always; if five or more domains were problematic, the participant qualified for a Major Depressive Episode (MDE) diagnosis. The results of a study, which included a large sample of 722 participants, were evaluated using a self-report method. This method did not allow for the most accurate data evaluation and may have altered the results of the study. The results of the
study indicated that 42% of the sample met the prerequisite for MDE. Of the 42% sample, 20% of the participants reported seven or more problematic domains and 2% of the individuals conveyed all the domains as problematic. To conclude, individuals with TBIs can suffer from depression as they tend to grieve over what they have lost after the injury.

Similar to ABI, the above study shows that individuals who had experienced a TBI also lack some self-awareness and perception of their deficits. NBIA (2014a) asserted that 90% of brain injuries could possibly be prevented with proper attention, education, and training. Educational and training manuals are currently used in clinical practice with a wide range of clientele. The following components of the literature review discuss the benefits and challenges of manuals, as well as the foundation for how manuals can assist individuals with brain injuries and ABI/TBI rehabilitation facilitators.

**Rationale for a Manual**

**Importance of manualized therapy.**

Educational and training manuals are used in current clinical practice when working with a wide range of clientele. Manuals allow for the implementation of diverse clinical treatments in a wide-range of settings. A manual’s level of specificity can vary from quite narrow, following a specific criterion, to broad and flexible (Kendall, Chu, Gifford, Hayes, & Nauta, 1998). Kendall et al. (1998) specified that manuals are most effective when used as a guide, rather than mimicked in a strict fashion. This is due to the fact that if a facilitator is focused on the strict fashion of the manual, they may not be taking into consideration their clients’ needs and alterations cannot be made to fit these needs. Manualized therapy can allow for greater structure and a time-limited approach, which places more focus on treatment implementations (Wilson, 1996). Moreover, Wilson (1996) elaborated that manual interventions, which create a cost-effective intervention, are often utilized further in practice compared to interventions that are higher in cost. Dickson et al. (2009) compared the cost of direct versus indirect therapy, and individual versus group therapy in speech and language rehabilitation. Specifically a manual was used in the indirect experimental group. Indirect therapy was classified as adhering to the directions of the manual; however, the manual was not to be followed in a strict step-by-step process, as the unstructured format allowed for more personal judgment and flexibility. The 124 participants were asked to complete a variety of clinical tests and their scores prior to intervention were compared to their post-test scores. Participants were randomly separated into one of the four experimental groups or a control group. All the participants received 30 minutes of therapy, three times a week, for 15 weeks. The results of the study showed that the largest increase in the language score from pre- to post-intervention was in the direct group therapy. The direct therapy group worked one-on-one with a therapist throughout the duration of the treatment and did not use a manual. Direct therapy was beneficial as the therapist and client had a collaborative role in decision-making because they did not have to follow the directions of a manual. However, the results differed when looking solely at salary costs. The cost results showed that indirect group therapy or the use of manuals was the most cost-efficient of the experimental groups. Although the analysis of the cost elements was narrow, this study suggested that using a flexible manual in a group setting can allow for a cost-efficient therapeutic approach.

**Controversies of manualized therapy.**

Manualized therapy offers many important benefits; however, the use of educational resources such as manuals can also have limitations. Primarily, the use of treatment manuals is often only prescribed to specific patient populations with a strict set of symptoms and deficits.
Kendall et al. (1998) showed that the use of manualized therapy is often seen as a set procedure, which is organized in a specific and detailed manner. Manuals must also follow firm guidelines with little variation from one client to another. With this notion, it would be extremely difficult to treat patients who presented with various symptoms and deficits. Similarly, Eifert, Schulte, Zvolensky, Lejuez, and Lau (1997) stated that a patient’s symptoms may not fit into specific categories and must therefore be seen as a combination of disorders and syndromes. In these cases, treatment using educational manuals may lead to poor or insignificant outcomes.

Another controversy that can arise in manualized therapy is when the facilitators focus solely on the manual’s structure. Only focusing on the structure of the manual can lead to lack of new learning for both the client and the therapist. Strupp and Anderson (1997) explained that therapist can tend to implement manualized therapy in a forced manner of delivery. This type of delivery leaves little room for natural learning and more focus on adhering to the manual’s protocols. Wallace and von Ranson (2011) examined manuals that were used to treat individuals with bulimia nervosa. The clinicians reported that of the 259 sampled clinicians, 35% used manualized treatment for their patients. The results showed that clinicians found that when implementing eclectic treatment was more beneficial to their clients than manual-based approaches. Strupp and Anderson (1997) added that manuals may alter the therapeutic relationship as the clients may feel less of a connection to their therapist and general therapeutic process. Manuals can affect therapeutic relationships negatively, as the main focus is on the manual and not the client’s needs. Addressing client’s issues prematurely and exploring the connections to those concerns can lead to lack of trust and openness from clients (Strupp & Anderson, 1997). The way clinicians use manual-based therapy has the ability to cause a gap in the patients’ connections to therapy due to the specificity of manualized therapy (Strupp & Anderson, 1997). Kendall et al. (1998) reinforces this thought by stating that when manual based therapy is followed rigidly, it can limit the development of alliances, communication, and trust with clinicians.

Manuals are often used in a narrow and rigid structure by facilitators with little training and/or experience. Subsequently, this may cause a loss of empirical data, as well as disruption of the many benefits associated with manualized therapy (Kendall et al., 1998). The facilitators offering manualized therapy may also be delivering irrelevant treatment as each patient may not require every component that is laid out in a manual. Patients who receive too much therapy, when it is not necessarily needed, can often become overwhelmed, frustrated and annoyed. These feelings may lead to patient dropout and/or neglect towards the required treatment sessions (Eifert et al., 1997).

In summary, a manual cannot provide a solution to every problem that arises during the treatment of patients, nor can a manual provide all the information needed to develop a specific treatment outline for all patients experiencing a specific set of symptoms (Kendall et al., 1998). Each patient and treatment experience is unique and attention is required in designing treatment accordingly. Overall, a “cookie-cutter” approach that uses a strict manual may help to improve the quality of life for a few patients at a time; but in doing so, it also excludes those patients who do not fall under the specific categories or cohorts set out by a structured manual.

**Components that comprise an effective manual.**

Since a number of pros and cons have been highlighted with the use of manuals, it is important to identify the components that contribute to an effective manual. Rothbaum (2004) described some approaches that should be integrated into a manual to make clinical training more effective. Some strategies that may be helpful in developing an effective manual include
creating a user-friendly design, as well as an organized framework to help increase acceptance and adaptation into clinical treatment. Weingardt (2004) explained that when manuals are developed using a specific focus, yet allow for flexibility, professionals have a higher success rate.

Another method for maximizing benefit is creating an interactive design. An interactive design can entail any activity that is paired with the manual, which allows clients to have a hands-on experience (Rothbaum, 2004). Adopting an interactive manual design may lead to an increase in participant engagement (Rothbaum, 2004). Subsequent to an interactive design, incorporating realistic materials into a manual will also create a more clinical and client-oriented context. Carrol and Rounsaville (2007) stated that treatment manuals tend to focus on theoretical and hypothetical concepts rather than focusing on the patient’s diverse real world problems.

In the review of the literature, multiple studies demonstrated the use of manualized therapy as it can assist individuals with real life issues while adhering to theoretical content. A manual’s content can be re-used and utilized in different applications throughout treatment sessions. This strategy becomes most important when creating a manual for individuals with brain injuries. These patients often display impaired memory and may require effective manualized therapy approaches. Having a manual’s framework follow a specific repetition can allow for less teaching and re-learning of concepts, which, in turn, can leave more time to focus on the manual’s treatment goals.

How Manuals Can Assist Individuals with Brain Injuries

Aiding skill deficits.

NBIA (2014b) stated that the brain controls essentially all of the body’s functions. After a brain injury, parts of the brain may become damaged and its functions may be negatively altered. Importantly, these effects may be difficult to identify by simply looking at an individual, as most of the problematic effects are often internal. Although evidence has proven that brain injuries can affect bodily functions, it should be noted that in some cases not all post-injury changes are due to the injury itself. Environmental factors may also have an effect. NBIA (2014b) discussed the major physical, cognitive, and psychosocial effects of brain injury.

Physical.

Physical effects of brain injuries can include any physical changes in body functions. These changes can be demonstrated in an individual’s energy levels, sleep, pain within the body, appetite, body temperature, and/or speech. Thünker and Pietrowsky (2012) examined how manuals can assist with nightmare and nightmare related anxiety rates in individuals with Major Depressive Disorder (MDD) or Posttraumatic Stress Disorder (PTSD). Sixty-nine individuals were recruited for the study. Questionnaires were administered to the participants prior to treatment, immediately at the conclusion of treatment, and at a 10-week follow-up appointment. After baseline assessments, participants were divided into one of three treatment groups: nightmare sufferers, nightmare sufferers with depression, or nightmare sufferers with PTSD, or a control group. Participants within the treatment groups received nightmare therapy. This therapy consisted of once weekly in-person therapy session for a total of eight weeks. In each session the therapist would teach a specific weekly therapeutic concept. Some examples of the therapeutic concepts include, relaxation training, progressive muscle relaxation training, and imagination skill training. Throughout the duration of the treatment individuals were also asked to keep a journal to record nightmare occurrences and anxiety levels related to the nightmare. The control group did not receive any treatment through the duration of the study. Thünker and Pietrowsky (2012) found that the results indicated that manualized therapy in the form of a CD
coupled with direct therapy can reduce nightmare and anxiety levels in individuals with depression and PTSD. The analysis conducted indicated that the individuals who suffered solely from nightmares had the largest decrease in nightmare and anxiety rate. Further, this suggests that although manuals may not be as effective for individuals with comorbid disorder, implementing manualized therapy is more beneficial than providing no therapy at all.

**Cognitive.**

NBIA (2014b) described the cognitive effects of brain injuries as any changes in an individual’s thinking abilities. This includes difficulties with focusing, thinking, understanding, learning, and/or executive functions. NBIA (2014b) specified that executive functions or tasks that utilized cognitive processes included, organizing, reasoning, decision-making, and/or problem-solving. Galovski, Blain, Mott, Elwood, and Houle (2012) evaluated manuals that assisted the cognitive processing of individuals who were diagnosed with PTSD. Individuals were randomly assigned to treatment groups; those were designated to the treatment group were given immediate Cognitive Processing Therapy (CPT). The therapist who implemented CPT followed a manual based therapy approach. The control group was not given any therapy throughout the duration of the study; however, participants in this group were asked to monitor their symptoms related to PTSD. After the post-intervention assessments were completed, the control group was given the opportunity to participate in CPT. The results of the study show that manualized therapy can assist with individuals cognitive processing as there was a significant (p <.001) improvement in the treatment group.

**Psychosocial.**

Psychosocial effects of brain injuries encompass changes in emotions and social behaviours (NBIA, 2014c). These changes can be found in self-awareness, self-focus, impulsivity, coping with change, and/or motivation. Psychosocial effects can lead to an increased rate of depression, anxiety, stress, anger, use of alcohol or drugs, and/or inability to work. Ledley et al. (2009) assessed the effectiveness of manual based therapy in treating social anxiety disorder. Thirty-eight individuals diagnosed with social anxiety disorders were administered seven baseline assessments. Individuals were randomly assigned to either immediate treatment (IT) or delayed treatment (DT) groups. Treatment content was implemented through a guided workbook that consisted of 20 weeks of material. Furthermore, during this time individuals completed 16 one-on-one direct therapy sessions. The DT group went through the same treatment as the IT group, but treatment was not initiated until 20 weeks after baseline assessments were completed. Results indicated that the levels of anxiety decreased for both treatment groups, yet there was a greater significant decrease (p <0.001) in the IT group. The results related to the immediacy in which treatment should be offered to those with a TBI. IT group scores also showed that the group’s quality of life had a slight increase compared to baseline scores. Follow-up treatment continued for three months post-treatment and the scores of the two groups did not differ significantly. The individuals did not use manualized therapy solely during treatment, as they were required to attend 16 individual counselling sessions. This study proved that manualized therapy can be an effective and timely intervention to treat psychosocial skill deficits. Regardless of the many limitations present, this study does suggested that manualized therapy can be an effective and timely tool.

The relevant literature showed that manuals are effective when treating physical, cognitive, and psychosocial deficits. Ledley et al. (2009) explained that manual-based treatments are more beneficial when utilized immediately after the onset of any impairment rather than following a delay. Although the above literature does not specifically relate to
individuals with brain injuries, it can be assumed that manual-based therapy may have similar effects and may generalize to this clientele. This assumption is supported by a number of sources that state that manuals can treat a wide range of clientele (Kendall et al., 1998; Rothbaum, 2004; Wilson, 1996). With that in mind, NBIA (2014c) stated that no two individuals have the same brain injury, although the two individuals may have many of the same effects that are typical for brain injury survivors. Intervention plans have to be tailored to a certain degree to fit the learning styles of each individual. There is a gap in the current literature there are a limited number of studies that focus on the use of manual-based therapy in treating physical, cognitive, or psychosocial impairments due to brain injuries.

**Incorporating manuals into rehabilitation.**

Cullen, Chundamala, Bayley, and Jutai (2007) explained that there is an extensive range of rehabilitation interventions used on individuals with brain injuries. Depending on the severity of the injury, individuals should be admitted into the hospital as soon as possible. Individuals who are deemed medically stable can transfer from acute care to a rehabilitation unit. Cullen et al. (2007) stated rehabilitation may not be a linear process as it is often individualized in length, type, as well as intensity. If the individual is placed into inpatient rehabilitation, they are assigned an interdisciplinary team. These teams may consist of nurses, nutritionists, occupational therapists, pharmacists, physiotherapists, psychologists, social service workers, speech and language pathologists, recreational therapists, as well as other health professionals (Providence Care Patient Handbook, 2013). It is a shared goal between individuals with brain injuries and the interdisciplinary team to assist in the most effective rehabilitation to heal the individual. Once the individual is at his/her healthiest, the clinician will allow the individual to be discharged from the hospital. Rosner, Lumbeck, and Geissner (2011) conducted a study in which 70 inpatients participated in therapy to assist their complicated grief disorder. Out of the 70 inpatients, 50 were placed into a treatment group and the remaining individuals were assigned to the control group. The treatment group completed four inventories and their pre- and post-treatment grief scores were compared. During treatment individuals who were in the treatment group were given therapy that followed a manualized approach, while the control group was provided with traditional treatment. The manualized therapy differed from traditional treatment as it had a specific focus on psychoeducation, model of grief, confrontation with loss, motivation of change, and cognitive behaviour therapy. Both groups showed a significant decrease (p <.001) when comparing pre-and post-treatment scores. The treatment group had higher grief scores on the pre-treatment test when compared to the control group. After the post-treatment grief scores were compared, the treatment group’s grief scores improved more than the control group (Rosner, Lumbeck, & Geissner, 2011). Overall, the study shows that manualized treatment can improve grief related symptoms in inpatients with brain injuries and that manualized therapy was proven to be more effective compared to a traditional treatment within the hospital setting.

Once an individual is deemed stable to be discharged from the hospital, they are then classified as an outpatient. Outpatients can return to their previous living arrangement and if deemed fit by a clinician, can return to their original lifestyle. If individuals are not deemed fit to return to their previous lifestyle, they have the option to continue with outpatient rehabilitation. Outpatient rehabilitation often consists of vocational or community rehabilitation (Cullen et al., 2007). The goal of vocational rehabilitation is to allow an opportunity for the individual to return to a working environment; whereas community rehabilitation focuses on assisting individuals with everyday life skills, building their independence, and social re-integration into
the community.

Similar to inpatient rehabilitation, individuals work with rehabilitation counsellors at their homes or within their community to set and achieve goals, which may ultimately help to improve quality of life. Driessen et al. (2013) tested the efficacy of manualized Cognitive Behavioural Therapy (CBT) compared to manualized Psychodynamic Therapy when treating individuals with Major Depressive Disorder. The participants in the study consisted of 341 adult outpatients. After the participants completed the baseline assessments, they were randomly assigned into either CBT or psychodynamic treatment group. A total of sixteen therapy sessions were conducted for both treatment groups. The therapy sessions followed clinical practices published in treatment manuals. Post-intervention assessments were completed and pre- and post-assessment scores were compared. The results of the study showed that there were no significant differences between treatment therapies; however, 45.6% of the participants met the remission criterion at the post-treatment assessment. This study did however show some limitations as there was no control group used to compare the score of the treatment group. Overall, the study showed that manualized treatment for both CBT and Psychodynamic Therapy can improve depression related symptoms in individuals with Major Depressive Disorder and nearly half of the participants met the remission criterion.

Although there appears to be limited studies utilizing manual-based therapies for rehabilitation, those available demonstrates clinically significant results. If manualized therapy was generalized to clientele with brain injuries, it can therefore be assumed that the results may prove to be effective outside of rehabilitation populations. Additionally, manuals can be implemented in various settings and may generalize to a variety of rehabilitation populations (Kendall et al., 1998; Rothbaum, 2004; Wilson, 1996).

**How Manuals Can Assist Facilitators**

In addition to assisting rehabilitation patients, manualized therapy may also offer many benefits to the facilitators who utilize this approach. Rehabilitation facilitators may use manuals that allow for adaptation in order to fit specific clientele. Manuals can offer a more organized and thorough approach to therapy in comparison to individualized treatment strategies, as well as providing an abundance of structured activities for patients. Davidson et al. (2004) discussed that manuals can also increase therapeutic competency within the clinical practice. This is due to manuals allowing facilitators to stay focused on relevant material, while also expanding on specific material that is most beneficial to the clients. Addis and Krasnow (2000) expressed that when manuals are used as a guide it allows for more flexibility and in turn can allow the facilitator to tailor the patient’s individual needs while adhering to their own clinical judgment. Kendall et al. (1998) agreed, stating that manuals as a guide can allow a larger emphasis on the client’s individual focuses and needs. In addition, Kendall et al. (1998) stated that facilitators can implement the techniques within the manual in a broad or specific application depending on the client’s individual needs. To assist facilitators with staying focused on the manual’s relevant material and the client’s needs, a participant manual can be created to allow for a better understanding of critical concepts. When a participant manual mimics the facilitator’s manual it often further aid’s most participants by allowing them to review the manual’s content prior to the sessions. Participant manuals are also beneficial to facilitators as it allows the participant to take the content provided during the session and review it at a later date. When participants have a more thorough understanding of the content presented in the manual, it may also allow for a more organized, yet flexible therapy session.

Najavits, Weiss, Shaw, and Dierberger (2000) stated that manuals help to create an
organized written form of treatment, which may inspire therapists to utilize a greater range of interventions and activities. In turn, this may help to standardize therapy interventions and improve the accuracy of research studies. These conclusions are based on the study, which examined 47 cognitive-behavioural therapists who completed a large-scale survey on the importance of treatment manuals (Najavits et al., 2000). The survey included 56 items using a 4-point scale with 0 indicating not at all and 4 indicating a great deal. Some example questions included, “can manuals be an important, helpful tool for clinical practice?” and “can manuals help one become a better clinician?” The survey also included three main components; overall response to treatment manuals and adherence scales, the ideal manual, and therapist background variables. Results showed that manualized therapy is beneficial for facilitators as all 47 cognitive-behavioural therapists viewed treatment manuals as highly favourable. Out of the total number of participants, 75% of them liked manuals either a lot or a great deal, with many therapists stating that manuals were most helpful for their clinical contributions, organization and adherence. Overall, the study performed by Najavits et al. (2000) demonstrated that effective treatment manuals can be beneficial for rehabilitation facilitators.

Summary

Manuals can be utilized for a wide variety of rehabilitation interventions, populations and settings. They are an effective treatment approach when they are well organized, structured, timely, clear and concise. Manuals can provide structure and organization to facilitators and offer user-friendly, client-focused, and interactive designs. Although manualized therapy does involve certain controversies, such as rigid structure, specific treatment approaches, and issues with adaptation, the use of manuals still provides many cost-effective benefits to both patients and facilitators. Specifically, manuals provide facilitators with organized, structured and effective teaching techniques. Manual-based therapy also allows for rehabilitation of both inpatients and outpatients. The information presented in this literature review supports the hypothesis that a focused, user-friendly, and well-structured manual may assist with the implementation of treatment strategies by a professional in the field of acquired or traumatic brain injuries.
Chapter III: Method

Settings

Agency.

The agency’s main focus is to support individuals within the community who have survived a moderate to severe brain injury by providing rehabilitation and specialized support services. The cooking rehabilitation group was facilitated within the common room at the agency. The common room was a sufficient location to hold a large group of individuals, as there is an oversized table and enough chairs for each of the participants. The common room was the location selected to facilitate the group’s interactive component. Attached to the common area is a fully equipped kitchen where the cooking component was completed.

Kitchen.

The kitchen was fully equipped with most materials (e.g., pots, utensils, stove) needed to run an effective cooking rehabilitation group. The cooking component of the group took place within the agency’s kitchen as it had a large enough surface area to allow all the individuals to take part in the program.

Facilitator

The facilitator of the group was a community rehabilitation counsellor from the community agency. It was the facilitator’s responsibility to implement the weekly sessions of a cooking rehabilitation program to aid individuals with brain injuries.

Group Participants

The participants of the rehabilitation group were five to ten individuals, both males and females, between 40 to 60 years of age. The participants were active outpatients who chose to voluntarily participate in the rehabilitation group. At the time of intake, the agency ensured their clients met the requirements to take part in their services. These requirements consisted of any individuals whose age range from 18 to 64, who resided in Ontario, has a documented history of a brain injury, and deemed medically and neurologically stable. Due to each participant’s brain injury, learning speeds varied, and thus the participant’s rehabilitation plans were altered to fit personal needs when necessary.

Consent

Each client of the agency had to give written and verbal consent during the initial intake process, which applied to all ongoing services provided by the agency. At intake, the participants were informed of their rights as an outpatient, which included the ability to withdraw from rehabilitation groups, confidentiality and without any punishment, as well as the right to receive ethical treatment.

Materials

Kitchen.

The kitchen consisted of one full-size refrigerator, one oven, and smaller appliances, such as a microwave, kettle, and coffeemaker. The kitchen also contained three sinks and a dishwasher that were used by the rehabilitation groups to clean the dishes used during the cooking components. Essential cookware, as well as eating utensils, was available. For example pots, pans, baking dishes, mixing spoon, serving fork, cutlery, plates, bowls, and cups were used by the participants. Kitchen materials changed on a weekly basis depending on the week’s recipes and topic.

Common area.

Adjacent to the kitchen is the common area where the interactive components of the rehabilitation group were presented. The common area contained a large table, multiple chairs,
and a white board. The group sat in the chairs and gathered at the table in the common area during the group’s interactive components and meal-time. When needed, the rehabilitation group used the white board to accommodate for the individuals’ learning styles. This was not limited to the facilitator or clients, as any individuals could draw or write on the white board for a visual explanation of the ideas. To elaborate further, if a member of the group was trying to explain a concept and the other members did not understanding, the individuals used the white board as a visual aid for a more thorough explanation.

**Facilitator’s manual.**

The manual was developed by gathering and organizing information after consulting with the agency staff. Supplementary information was found from various resources online and books. The manual was constituted by educational resources and supplementary handouts that were generated by the student researcher. The manual consisted of a title page, table of contents, instructional overview, and 10 weekly sessions. The manual was printed as a hard copy, placed inside a binder and sessions were separated by dividers labeled Session One through Ten.

**Handouts.**

Each weekly session in the manual was comprised of an interactive component that reflected an educational topic related to cooking and a recipe that was used in the cooking component of the session. The interactive component of the manual contained handouts that provided information on the weekly topics and activity pages that allowed participants to actively engage in the lesson. The weekly handouts ranged from one to four pages of educational information and were used to give a descriptive overview of the weekly educational topic. If any additional educational resources (e.g., Food Guide) were needed to give further explanation of the educational topic, the resources could be paired with the handout.

**Activity sheets.**

In addition to the handouts, activity pages were created that were parallel to the information used in the handouts. Each activity page allowed the facilitator to assist the participants of the group to grasp a more thorough understanding of the educational topic by applying the information learned from the handouts to the activity page. The facilitator’s activity sheets included the answers to the activity page as it was used as an answer guide. The activity sheets varied in format that coincides with the current week’s specified topic. For example, Session One’s activity sheet utilized a fill in the blank format when teaching the participants how to read a recipe. For a detailed description of the educational topics, learning objectives, and weekly activities see Appendix A.

**Recipes.**

A recipe was inserted into the manual following the activity page. The weekly recipes were used in the cooking component of the rehabilitation group that followed the interactive component.

**Session structure.**

A description of Session One is described below as an example of the information and materials used in one session of the manual. The other nine weekly sessions followed the same format as Session One; however the handouts, activity sheets, additional resources, and recipes were alter to fit the session’s weekly topic.

Session One included a facilitator handout that provided the participants with detailed information on how to read a recipe. This information focused on explaining each section of a recipe (i.e., ingredients, yield, preparation, directions) and where each section was located on a recipe sheet. An activity sheet followed the handout in the manual. The facilitator’s activity
sheet was a standard recipe that remained labeled and was used as an answer key for the participants. No additional resources were used in Session One. A recipe was included in the manual after the activity sheets and was used during the cooking component of the rehabilitation group.

**Participant resource manual.**

The participant’s resource manual was comprised of a title page, table of contents, instructional overview, and 10 weekly sessions. Like the facilitator’s manual, the participant’s resource manual was printed, placed in a binder and separated by dividers that were labeled Sessions One through Ten. The topics of the weekly sessions were the same as those in the facilitator’s manual. The materials within the interactive components and cooking components (i.e., handouts; activity pages; additional resources; recipes) also remained the same as the facilitator’s manual with the exceptions of minor alterations to the handouts and activity sheets.

**Handouts.**

The participants were provided with the same handout as the facilitators; however, key aspects of the handout were removed to create a guided note handout. The key aspects of the handout were removed; the participants were asked to follow along with the facilitator and fill in the necessary blanks. The purpose of the guided note handouts was to allow for a more thorough understanding of key aspects through repetitive learning.

**Activity sheets.**

The participant’s activity sheet differed from the facilitator’s as the answers to the activity sheets were not provided to the participants. The participant had to use the information from the guided note handouts to provide appropriate answers to the activity sheets. Similarly to the guided note handouts, the reasoning behind the activity sheets is to provide a comprehensive understanding of key aspects through repetitive learning.

**Summary.**

The participants had the option to take home their manual, provided that they returned with it for each weekly session. For individuals who did not want to take their manual, it was left at the agency throughout the duration of the rehabilitation group. At the end of the 10 weeks the participants were allowed to keep their manuals.

**Measures**

A facilitator’s feedback survey (Appendix B) was created by the student researcher. The agency’s staff was asked to complete the facilitator’s feedback survey, as they could be the potential facilitator to implement the manual. The feedback survey consisted of 10 statements ranked on a Likert scale. The Likert scale rating was ranked from, (1) *Strongly Disagree*, (2) *Disagree*, (3) *Neutral*, (4) *Agree*, or (5) *Strongly Agree*. The facilitator circled the number that indicated their satisfaction on the specific elements of the manual. The statements on the survey evaluated the perceived effectiveness of the manual. The appearance, layout, content, usefulness, and usability of the manual were evaluated. Descriptive statistics were used to assess the results from the feedback survey and were presented graphically. Feedback provided by the surveys allowed for necessary changes to be made to the manual.

**Procedures**

**Overview.**

The 10-session rehabilitation group took place once a week, on a specified day, for three hours. There were no scheduled breaks during the sessions; however individuals were allowed to take personal breaks when needed. Each session began with a one-hour interactive component, followed by a two-hour cooking component. Detailed descriptions of the interactive
and cooking components are described below. The participants were expected to take part in both the interactive and cooking components throughout the 10 weekly sessions.

**Interactive component.**

The interactive component was presented at the beginning of each session and was a minimum of one hour in length. This component was based on the educational topic associated with meal preparation and cooking. Each interactive component had a learning objective, which related to the educational topic. The goal of each weekly session was for the participants to attain the learning objective.

The facilitator began the interactive component by introducing the weekly educational topic and recipe that would be used during the cooking component. The facilitator continued the session by reading the educational handout. While the facilitator was reading the handout, the participants followed along with the facilitator while filling out their guided note handouts and were permitted to ask questions as needed. A specific time frame for reading the handouts and filling in the guided note handouts was not established as the duration could vary from week to week.

After the facilitator felt as though there was a thorough understanding of the educational topic and all of the participants had completed the guided note handouts, the facilitator could transition the group to the activity sheet that related to the educational topic. The facilitator explained the instructions of the activity sheet and provided the participants with the opportunity to ask questions if there was not a complete understanding. When all of the participants had completed their activity sheet, the facilitator discussed the answers with the clients to ensure that they correctly understood the concept being taught. Similar to the handout component of the session, a specific time frame for completing the activity sheets was not established as the duration varied from week to week. Once the rehabilitation group finished the interactive component, they transitioned to the cooking component.

**Cooking component.**

The cooking component took place during the last two hours of the session. During this time the participants went grocery shopping, cooked a meal in the kitchen, and cleaned the kitchen. Based on popular recipes used in the previous rehabilitation groups, the student researcher and facilitator pre-arranged the recipes that would be used during the cooking component. Initially the facilitator reviewed the recipe with the participants by listing the ingredients, cooking materials, and cook time. Following the review of the recipe, the group relocated to the kitchen and gathered all the ingredients and materials used to make the recipe. At this time, if the agency did not have specific ingredients used in the recipe, the group walked to the local grocery store and purchased the ingredients needed. Once the group returned to the agency from the grocery store, the meal preparation began. If however, all the ingredients were present at the agency, the group began preparing the recipe immediately. At this point, if the oven was required, it was preheated to the selected temperature by a participant or the facilitator.

Preparation duties varied depending on the recipe. General preparation duties included, but were not limited to, washing, cutting, and/or peeling the ingredients, combining the ingredients together into a pan or bake ware, and placing it in the oven or cooking it on the stove top. Preparation duties were assigned by the facilitator, as she had knowledge of participants’ cooking restrictions (i.e., ability to use knives, oven, stove top, etc.). Preparation duties were recorded to allow for participants to rotate duties from week to week. If the meal had to cook in the oven or stove top the facilitator selected members of the group to perform this task.

During the time that the meal was cooking, the group gathered in the common area and
conversed about topics that they preferred, while continuously checking on the meal. Once the meal was finished cooking, the group stayed in the common area and ate the meal at the table. The participants of the group collectively assisted in the cleaning process by loading the dishwasher and wiping down the common area and kitchen area used throughout the session. The facilitator concluded the session by providing a summary of the educational topic used in the interactive component, asked the participants for feedback on the meal they created, and recorded the feedback provided. Finally, if there was any leftover food from the cooking component, the group had the opportunity to take it with them and the session was adjourned.
Chapter IV: Results

Facilitator’s Manual

‘A Facilitator’s Manual for an Instructional Cooking Program’ can be found in Appendix C. The manual was used as a reference guide for a facilitator of a cooking rehabilitation group for individuals with brain injuries.

The manual was a result of literature evaluation on topics of brain injuries and the use of manualized therapies aiding with physical, cognitive, and psychosocial skill deficits in hospital and community settings. The literature also supported how manuals can assist in rehabilitation with the support of a facilitator.

Facilitator’s Feedback Survey

The facilitator feedback survey was used to evaluate the effectiveness of the manual based on the appearance, layout, content, usefulness, and usability. Ten specific questions were developed to determine the facilitator’s satisfaction with the manual and if the manual was a valued resource for the agency. The Likert scale rating was ranked from, (1) Strongly Disagree, (2) Disagree, (3) Neutral, (4) Agree, or (5) Strongly Agree. Each of the bars indicates the facilitator’s satisfaction on the specified question. Each question focuses on a different element of the manual. Refer to Appendix B for feedback survey questions written in full detail. The results of Facilitator A’s feedback survey are illustrated in Figure 1 and Facilitator B’s feedback survey results are presented in Figure 2.

Figure 1. Facilitator A’s satisfaction was represented based on the scores of the feedback survey.
In nearly all of the questions, both facilitators had positive reviews of the manual. The results of the feedback survey indicated the manual was visually appealing and appropriate, well-organized, and relevant to the clientele of the agency. The manual was rated easy to use, finding the resources within the manual was not difficult, and the facilitator was of the opinion that the manual would be beneficial to the clients. The facilitators gave verbal feedback that the handout for Session Two should be written more simply to ensure the clientele understood the information. Overall, Facilitator A and B enjoyed the manual and stated it would be beneficial to their agency, exhibiting social validity. The facilitator feedback survey was used to evaluate the perceived effectiveness of the manual based on the appearance, layout, content, usefulness, and usability.
Chapter V: Conclusion/Discussion

Overview

The purpose of the study was to create a facilitator’s manual for a cooking program to aid individuals with an acquired brain injury. In doing so, empirical findings from the literature also supported how manuals can assist in rehabilitation with the support of a facilitator. The researcher consulted with agency staff, followed by gathering and organizing supplementary information found from various resources online. A user-friendly and well-organized layout was used to construct the manual to assist in the implementation of rehabilitation intervention strategies by a facilitator of the agency. Through the development of the manual, a facilitator can run an effective rehabilitation program to teach cooking skills to individuals with ABIs. The organized structure and effective use of time made the cooking rehabilitation group beneficial for individuals diagnosed with ABIs. The manual was also beneficial to individuals with ABIs because it followed quality assurance, allowed the facilitator to stay on track, and ensured that essential information does not get omitted.

After the manual was created, a facilitator’s feedback survey was developed to evaluate the manual’s perceived effectiveness. It was hypothesized that a focused, user-friendly, and well-structured manual may aid with the implementation of treatment strategies by a professional in the field of acquired or traumatic brain injuries. Based on the results of the facilitators’ feedback surveys completed by two facilitators, the manual was considered well-organized and visually appealing and appropriate. The manual was scored as easy to use and locating the resources within the manual was not difficult. Both facilitators gave verbal feedback to change the handout for Session Two. Session Two handout was changed and written more simply to ensure the clientele understood the information. Overall, both facilitators felt as though the manual would be beneficial to their clientele and agency, which shows social validity.

Strengths

The manual was developed to give structure to a cooking program. The manual’s organized structure paired with time management allowed the facilitator to stay on track and ensure that essential information does not get omitted from the program. Manual also allowed for more consistency from session to session. The handouts of the interactive component helped the participants stay engaged in the lessons. The cooking component of the manual allowed the participants to participate in direct experience, resulting in beneficial practice effect for group participants. The participant’s manual created was used as a reference for the participants throughout the group sessions. The resource manual assisted the participants as it allowed the materials learned during group to be generalized at home. Finally, the results of the facilitators’ feedback surveys confirmed the hypothesis that a user-friendly and well-structured manual may aid with the implementation of treatment strategies by a professional in the field of acquired or traumatic brain injuries.

Limitations

Due to the time constraints, the student researcher could not implement the manual and could only receive feedback from two potential facilitators. With this in mind, it cannot be assumed that all future facilitators would find the manual beneficial for the agency and clientele. Furthermore, if additional facilitators were provided with the feedback survey they could have provided a different perspective or feedback that could have improved the manual. Thus it could lead to a potential challenge when implementing the manual in the future due to the limiting generalization.

Researching additional resources than the ones provided may have provided the manual...
with a wider variety of information for weekly handouts and activity sheets. Also, facilitators could not provide written feedback to suggest alterations to the manual as the feedback survey only used Likert style questions. By adding additional space to the survey the facilitators could have provided the student researcher with written comments to areas that need to be improved. Unfortunately, due to a lack of empirical evaluation, the manual did not directly test if the program will improve the cooking skills of individuals with brain injuries.

**Multilevel Challenges to Manual Implementation**

**Client level.**

An ABI can impair an individual’s life traumatically and lead to significant deficits. Cognitions, behaviours, emotions, and physical health can be affected by an ABI. Rehabilitation can aid individuals with ABIs; however, the individuals may not have the ability to return to their previous lifestyle due to deficits, some of which may be permanent. An ABI can hinder the ability of an individual to master appropriate life skills, independence, and social integration. The client may not have the abilities to complete guided note handouts and activity sheets due to their personal deficits.

**Program level.**

The manual is facilitated by community rehabilitation counsellors to assist individuals with ABIs and aims to aid their cooking skills and their independence. The clients who take part in the rehabilitation groups may become frustrated if there is a change to an already existing program because there would be a lack of consistency when comparing the manualized based intervention and the current program.

**Agency level.**

The community agency works with other organizations and outside services to form the best possible resources for the clients. For ethical purposes, if any interactions with human participants were used in this study, it had to be reviewed by the agency’s ethics review board. Due to the timing and placement schedule, approval from the review board was not possible. That being said, current group participants’ feedback on the manual was not incorporated into this study.

**Societal level.**

Individuals with ABIs often face many deficits post-injury. Due to these deficits, individuals with brain injuries may express a lack of understanding when completing certain tasks. Individuals with brain injuries may face social stigmas when they are unable to complete basic task when present in the community. If the public was more aware about ABIs, through resources and information, they would be better suited to assist clients within the community.

**Contributions to Behavioural Psychology Field**

This study contributes to the behavioural psychology as there is a manual-based therapy to assist a facilitator to run an effective rehabilitation group to teach cooking skill to individuals with brain injuries. Providing a facilitator with a user-friendly and well-organized manual can assist in the implementation of rehabilitation intervention strategies with clients with physical, cognitive, and psychosocial deficits in hospital- and community-based settings. This study also adds to the behavioural psychology field because a cooking manual has not been developed or used in the agency. There is also little evidence that supports cooking manuals for individuals with brain injuries have been developed and used within the literature or psychology field. This study will provide future researchers with more information on facilitator’s manuals that focuses on cooking skills and targets individuals with brain injuries.
Recommendations for Future Research

As stated above, this study lacked an empirical evaluation to test if the manual could improve the cooking skills of individuals with brain injuries. Therefore, it is recommended that the manual be implemented as indicated in the Procedures section of Chapter III: Method in the study. It is further recommended that the student researcher be present or have contact with the facilitator during implementation of the manual. This is due the fact that if any questions or concerns arise, the researcher is able to give clarification in a timely manner. After the manual is implemented, an evaluation needs to be obtained from the staff and/or clients to ensure the manual was implemented efficiently. Finally, recommended suggestions and modifications to the manual should be taken into consideration after being implemented. The feedback could potentially improve the future content of the manuals and usage by both facilitators and participants. Additionally, if the manual is proven to be effective when treating individuals with brain injuries, other manuals can be created to treat additional life skills.
References


## Appendix A

### Description of the educational topics, learning objectives, and weekly activities

<table>
<thead>
<tr>
<th>Sessions</th>
<th>Educational Topic</th>
<th>Learning Objective</th>
<th>Activity Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How to read a recipe</td>
<td>• Read a recipe accurately</td>
<td>• Each section of a recipe was removed and participants had to label the appropriate sections.</td>
</tr>
<tr>
<td>2</td>
<td>How to write a recipe</td>
<td>• Write a recipe using clearly labeled sections.</td>
<td>• A recipe template was created and participants had to practice writing out a recipe in the proper format.</td>
</tr>
<tr>
<td>3</td>
<td>Food Groups’ Number of Servings per Day</td>
<td>• Obtain general knowledge on the recommended daily food groups’ servings</td>
<td>• Participants had to match the appropriate food groups with their recommended daily servings.</td>
</tr>
<tr>
<td>4</td>
<td>Food Groups’ Serving Sizes</td>
<td>• Obtain general knowledge on recommended servings sizes</td>
<td>• Participants had to match the appropriate food groups with their recommended serving size.</td>
</tr>
<tr>
<td>5</td>
<td>Safety Information on Food Storage</td>
<td>• Obtain general knowledge on safety information for food storage</td>
<td>• Participants had to match the appropriate food groups with their recommended storage duration.</td>
</tr>
<tr>
<td>6</td>
<td>Food Guide Education: Fruit and vegetable products</td>
<td>• Obtain general education and dietary restriction about fruit and vegetable products</td>
<td>• Participants were asked multiple choice questions that correlated with the information on the handout.</td>
</tr>
<tr>
<td>7</td>
<td>Food Guide Education: Meat and alternative products</td>
<td>• Obtain general education and dietary restriction about meat and alternative products</td>
<td>• Participants were asked multiple choice questions that correlated with the information on the handout.</td>
</tr>
<tr>
<td>8</td>
<td>Food Guide Education: Grain products</td>
<td>• Obtain general education and dietary restriction about grain products</td>
<td>• Participants were asked multiple choice questions that correlated with the information on the handout.</td>
</tr>
<tr>
<td>9</td>
<td>Food Guide Education: Milk and alternative products</td>
<td>• Obtain general education and dietary restriction about milk and alternative products</td>
<td>• Participants were asked multiple choice questions that correlated with the information on the handout.</td>
</tr>
<tr>
<td>10</td>
<td>Potluck</td>
<td>• Combine all the learning objectives in the previous nine sessions.</td>
<td>• Participants were asked to show a thorough understand of the education provided in the past nine weeks. They were asked to create a recipe based on a certain food group or dietary restriction, write out the recipe to their dish, and bring it into the group to share with their friends.</td>
</tr>
</tbody>
</table>

*Program can be adapted by providing the participants with a reader, scriber, or cut and paste activity options.*
Appendix B

Facilitator’s feedback survey
On a scale rating of 1 to 5, 1 being strongly disagree and 5 being strongly agree, circle the number that indicates your satisfaction of specific elements of the manual.

1. **The content of the manual is visually appealing:**

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

2. **The manual is formatted in a way that is easy to use:**

<table>
<thead>
<tr>
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</table>

3. **The manual is organized well:**

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</table>

4. **Finding resources within the manual is not difficult:**

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</table>

5. **Information provided within the manual is easy to understand:**

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<td>Agree</td>
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</table>

6. **Information provided within the manual is relevant to the clientele:**

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<td>Agree</td>
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</table>

7. **The manual includes pictures and charts relevant to information being provided:**

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</table>

8. **The manual will be beneficial to the agency:**

<table>
<thead>
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<td>Agree</td>
<td>Strongly Agree</td>
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</tbody>
</table>

9. **The participant’s manual will be beneficial to the clients:**

<table>
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</table>

10. **In the future, I would use this manual:**

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