Increasing the Knowledge of Relaxation, Use of Relaxation Techniques, and Level of Relaxation in the Everyday Life of an Adult with an Acquired Brain Injury

by

Sarah Downing

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ABSTRACT

Approximately 1.4 million people per year sustain traumatic brain injuries in America (Long, Gouvier, & Cole, 1984). It is estimated that thousands of Canadians incur traumatic brain injury each year, the majority being adults. As a result of improved emergency technology, 95% of these victims will survive. Most of the survivors, however, will have multiple and permanent disabilities requiring intensive rehabilitation (Crane & Joyce, 1991). In many cases, relaxation therapy can be an important part of this rehabilitation. This thesis hypothesized that the use of a relaxation therapy program would increase the knowledge of relaxation, use of relaxation techniques, and level of relaxation in the everyday life of an adult with an acquired brain injury. The current literature in the field was reviewed to ensure the most effective components of relaxation therapy were used. The relaxation therapy program lasted for a period of 5-weeks and consisted of 4 relaxation therapy sessions a week. This program emphasized three specific relaxation techniques: deep breathing, imagery relaxation, and muscle relaxation. Prompting and praise were also incorporated into the program as a crucial component. The relaxation therapy program was shown to be effective in increasing the knowledge of relaxation, the use of relaxation techniques, and level of relaxation in an adult with acquired brain injury. These increases generalized across multiple everyday settings.
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Chapter I: Introduction

Overview

Approximately 1.4 million people per year sustain traumatic brain injuries (Long, Gouvier, & Cole, 1984). As a result of improved emergency technology, 95% of these victims will survive. Most of the survivors, however, will have multiple and permanent disabilities requiring intensive rehabilitation (Crane & Joyce, 1991). With the increase in demand to provide assistance to the acquired brain injury population, effective treatment techniques are crucial. Armengol (1999) contends that application of relaxation techniques can be helpful for the acquired brain injury population. Accordingly, the present study provided a client with acquired brain injury program involving traumatic brain injury education, relaxation techniques, coping skills development, behavioural goal setting and monitoring, and family participation.

Rationale

As individuals who have acquired brain injury are surviving at higher rates, an investigation into the types of interventions and treatments that can improve their everyday functioning is needed. The exact components of RT that would be most beneficial to teach to an acquired brain injury client will be explored.

Hypothesis

For the purpose of this thesis, RT was conducted within a residential setting through a RT program, with a male adult who had an acquired brain injury. This was done to determine its impact on his knowledge of relaxation, use of relaxation techniques, and level of relaxation in his everyday life. Therefore, it was hypothesized that the use of a RT program would increase the knowledge of relaxation, use of relaxation techniques, and level of relaxation in the everyday life of an adult male with an acquired brain injury.
Chapter II: Literature Review

The following literature was explored, summarized, and evaluated in relation to relaxation therapy and acquired brain injury.

Relaxation Therapy

Pawlow, O'Neil, & Malcolm (2003) conducted a study which investigated the use of a relaxation intervention in reducing stress levels with a night eating syndrome population. There were two groups within the study. One group was made up of adults who received relaxation training and the other group was made up of adults who served as a control group. The group of adults who received the relaxation training showed a significant reduction in stress, anxiety, and hunger. The results of this study suggest that practicing relaxation can help to decrease stress and anxiety, especially within a night eating syndrome population.

Stapleton, Taylor, & Asmundson (2006) studied the efficacy of prolonged exposure, eye movement desensitization/reprocessing, relaxation training on trait anger, and guilt on trauma-related anger/guilt based in clients diagnosed with posttraumatic stress disorder. These treatment components reduced anger and guilt and a follow-up showed that change was maintained even when the study was over. Furthermore, the intervention was successful in minimizing measures of anger and guilt in a posttraumatic stress disorder population.

Larsson, Carlsson, Fichtel, & Melin (2005) examined the effectiveness and efficiency of relaxation training in an adolescent population. The relaxation training was carried out within a school setting. The results determined that a relaxation approach administered by a therapist was most successful when compared to self or school-nurse administration of a relaxation approach. Relaxation treatment decreased total headache activity, the number of headache days, and the headache intensity. At a 6 to 10 month follow-up, results of treatment were maintained. The relaxation treatment administered was shown effective as a treatment for adolescents who experience either tension type headaches or migraines.

Chang, Boehmer, Zhao, & Sommers (2007) conducted a study with two groups of randomized HIV/AIDS patients. All participants received acupuncture treatments (control and intervention groups). Along with acupuncture treatment, the intervention group also received a form of treatment involving a relaxation response. The results of this pilot study concluded that the addition of a relaxation response technique to acupuncture may boost improvement in the quality of life of patients with HIV/AIDS. However, further investigation into this combined treatment approach is required.

Bagheri-Nesami, Mohseni-Bandpei, & Shayesteh-Azar (2006) created a study to assess the effects of Benson’s Relaxation Technique (BRT) combined with medication in patients with rheumatoid arthritis. The experimental group received BRT combined with medication and the control group only received medication. This study focused on the
assessment of clinical symptoms, laboratory findings, anxiety, depression and feeling of well-being to determine the effects of BRT. After completion of pre-post assessments, there was a significant difference between the two groups in anxiety, depression, and feeling of well-being. The results showed how BRT can be helpful in reducing disease process in patients with rheumatoid arthritis. However, a larger sample size and greater length in intervention period was recommended in further investigations.

Nedstrand, Wyon, Hammar, & Wijma (2006) evaluated the effects of applied relaxation and electro-acupuncture (EA) on psychological well-being in breast cancer-treated women. The results showed significant improvements in psychological well-being and at follow-up. Psychological well-being significantly improved in women with breast cancer with the use of applied relaxation and electro-acupuncture.

Jain, Shapiro, Swanick, Roesch, Mills, Bell, et al. (2007) conducted a study to assess mindfulness meditation versus somatic relaxation training. Various measures were assessed. There were significant decreases in distress and increases in positive mood states in both meditation and relaxation groups. The study determined that there were no significant differences between the meditation and relaxation groups.

Nassiri (2005) examined the impact of regular relaxation on the perceived levels of stress in primary education teachers. It was hypothesized that regular relaxation would result in lower perceived levels of stress based on a stress scale score. Results verified this hypothesis and concluded that regular relaxation significantly can lower the perceived levels of stress scale scores.

Aivazyan, Zaitsev, Salenko, & Yurenev (1988) conducted a study with participants randomly placed in two groups. One group received autogenic training, biofeedback, or breathing-relaxation training and the other group served as a control. Half of the control group received no treatment and the other half were treated with a “psychological placebo”. Data obtained from all participants who participated in the relaxation therapy was analyzed. The results showed that the treatment group had significant reduction in systolic/diastolic blood pressures, peripheral vascular resistance, hypertensive response to emotional stress, and an improvement in psychological adaptation, quality of life, and capacity to work. Biofeedback and breathing-relaxation training resulted in the greatest reduction in blood pressure.

May, House, & Kovacs (1982) used group relaxation therapy to improve ways of coping with stress for patients who were being seen in an evening mental health clinic at a large medical school teaching hospital. Prior to treatment, the patients were displaying various signs of stress and anxiety. The study consisted of six sessions that utilized a range of relaxation procedures. Patients’ responses to the relaxation procedures indicated improvements in regard to somatic complaints, interpersonal relationships, and their sense of personal control. Teaching relaxation procedures appears to be a cost effective way of encouraging improved ways of coping with stress and individual responsibility for healthful behaviour in a heterogeneous population.
Krampen & von Eye (2006) presented a study that focused on the significance of motives for achievement. The focus was also on transferring these motives to everyday life. The intervention consisted of progressive muscle relaxation and autogenic training. The long-term outcomes of intervention included transfer of relaxation exercises to everyday life. The results established that participation motives are relevant to one’s adaptation of relaxation therapies in everyday life.

Yung, Fung, Chan, & Lau (2004) carried out a study with the focus of application of stretch-release relaxation and cognitive relaxation training to improve the mental health for nurse managers. The results of the study demonstrated that both stretch-release and cognitive relaxation training can improve mental health in nurses.

Lohaus & Klein-Hessling (2003) investigated the effects of progressive muscle relaxation and imagination. The techniques were compared and the results showed the short-term effectiveness of relaxation techniques. When treatment was extended or intensified in this study, it did not appear to be more effective.

Based on these studies as well as others in the current literature, it is evident that relaxation therapy is an effective form of treatment for various stress-related disturbances in individuals’ lives. Relaxation has been proven to be an effective form of treatment for medical conditions, depression, stress or anxiety, quality of life and much more. Clearly, relaxation has been applied to wide variety of populations with successful results.

**Imagery Relaxation**

Louie (2004) carried out a study with the purpose of investigating the effects of guided imagery relaxation in a chronic obstructive pulmonary disease (COPD) population. The results of the study were significant but there is a need for further exploration in regard to the psychological effects of guided imagery.

Dobson, Bray, Kehle, Theodore, & Peck (2005) applied the use of relaxation and guided-imagery (RGI) in children with asthma. This study examined the effectiveness of RGI with an elementary school population. The overall effect on happiness, anxiety, and quality of life of the participants was also assessed. The results showed that RGI improved the asthma of 3 out 4 participants. Also, the study illustrated successful results in regard to the happiness, level of state anxiety, and trait anxiety in all participants.

León-Pizarro, Gich, Barthe, Rovirosa, Farrús, Casas, et al. (2007) examined the efficacy of relaxation and guided imagery to reduce anxiety and depression in patients undergoing brachytherapy. The study consisted of two groups with only one receiving training in relaxation and guided imagery. It was found that the treatment group showed significantly reduced anxiety, depression, and body discomfort when compared to the control group. The use of relaxation techniques and guided imagery is effective in decreasing levels of anxiety, depression, and body discomfort in patients undergoing brachytherapy. The authors stressed how such interventions are low-cost and as well as effective.
Lohaus, Klein-Heßling, Vögele, & Kuhn-Hennighausen (2001) compared the effects of progressive muscle relaxation and imagery-based relaxation training on children’s physiological and subjective responses. There were three different experimental conditions. The first was a progressive muscle relaxation condition, the second an imagery-based relaxation condition, and the third a control condition. The imagery-based relaxation condition resulted in the most relaxed physiological pattern. Results indicated psychophysiological effects of relaxation.

**Muscle Relaxation**

Nickel, Lahmann, Tritt, Loew, Rother, & Nickel (2005) conducted a study to determine the effectiveness of progressive muscle relaxation (PMR) for anger in a population of stressed male adolescents. These male adolescents consisted of participants with an elevated anger-out score. For eight weeks, a randomly selected group engaged in progressive muscle relaxation and another group served as the control group. Progressive muscle relaxation was successful in reducing aggression in the stressed male adolescents. The form of treatment used was also related to subsequent improvements in the participants’ health-related quality of life.

Rausch, Gramling, & Auerbach (2006) conducted a study in which the participants in the meditation and progressive muscle relaxation (PMR) groups showed more decreases in cognitive, somatic and general state anxiety than did the controls. The PMR group had the greatest decline in somatic anxiety, while the participants who experienced the relaxation condition showed the most reduced rates of state anxiety.

Hui, Wan, Chan, & Yung (2006) evaluated and compared two different behavioural rehabilitation programs that were geared to improving the quality of life in cardiac patients. The first group of patients received instructions and practiced progressive relaxation where the second group of patients were trained in qigong. The sessions were 20 minutes in length and lasted for a total of eight weeks. Progressive relaxation was shown the most effective and beneficial to the patients. Patients undergoing qigong training also showed improvements in certain measures. The results determined that progressive relaxation and qigong improved the quality of life in cardiac patients in regard to specific physiologic and psychological measures.

Nakaya, Kumano, Minoda, Koguchi, Tanouchi, Kanazawa, et al. (2004) conducted a study to test whether muscle relaxation was effective on the psychological well-being of juvenile delinquents. The intervention involved two groups, where one group received the muscle relaxation treatment and the other served as a control group. The results indicated that muscle relaxation therapy may enhance frustration tolerance in juvenile delinquents.

Ghoncheh & Smith (2004) carried out an intervention that focused on progressive muscle relaxation. It was hypothesized that progressive muscle relaxation training would lead to a reduction of psychiatric and behavioural difficulties in customer service.
representatives who responded to customer complaints. It could also enhance their performance on cognitive screening measures. The participants who learned progressive muscle relaxation showed significant improvements in psychiatric/behavioural disturbance and on measure of memory/verbal fluency. The study supported the use of progressive muscle relaxation as a valuable technique in treating psychiatric and behavioural disturbance with this population.

Cheung, Molassiotis, & Chang (2003) assessed the use of progressive muscle relaxation training on anxiety and quality of life in colorectal cancer patients. There were significant increases in state anxiety and quality of life following the use of progressive muscle relaxation training in the experimental group. Such an approach is cost-effective and requires minimal training.

**Relaxation Therapy and Acquired Brain Injury**

Armengol (1999) designed a culturally sensitive support group on traumatic brain injury (TBI) with the focus of TBI education, relaxation techniques, coping skills development, behavioural goal setting and monitoring, and family participation. All participants were higher-level functioning TBI survivors. The participants showed improvements in sense of personal destiny and feelings of hopelessness. The gains of the study were maintained after a one year period. This study also emphasized the importance of culturally sensitive support for individuals.

Zencius & Wesolowski (1990) used a three-step stress management program that consisted of identifying a stressful state, removal of self stressful environment, and self-initiation of relaxation for a head injured female who displayed impatience and agitation. This study addressed the common behavioural characteristics of traumatically brain injured individuals such as restlessness, impatience, agitation, irritability, tension, and anxiety. The stress management program focused on recognizing early signs of stress building up by emphasizing muscle relaxation. The procedure resulted in immediate decreases in elopements and shows how a three-step management program can be successful in decreasing inappropriate behavior in a TBI individual who experiences high levels of tension and anxiety.

Guercio, Ferguson, & McMorrow (2001) examined the effects of behavioural relaxation training and biofeedback on an ataxic tremor of an adult with an acquired brain injury. The participant was taught relaxation techniques before biofeedback was introduced. The effects of the relaxation training demonstrated that the participant learned how to significantly decrease the severity of tremor.

Crane & Joyce (1991) investigated the effects of a "cool down" training procedure on two adult males with brain injuries. The “cool down” training procedures involved 1-hour role plays which included training in biofeedback, covert behavioural reversal, and relaxation techniques. The results revealed that the “cool down” training was effective in reducing both verbal and physical aggression in these clients.
**Summary of Literature Review**

Since this study consisted of RT, it was crucial to review the literature relevant to the specific techniques that were to be used. After depth investigation into the literature, it was determined that RT in this study would primarily consist of deep breathing, imagery relaxation, and muscle relaxation. It is obvious that deep breathing is one of the most effective techniques incorporated into relaxation therapy. Following, the literature in regard to imagery relaxation and muscle relaxation is summarized.

It appears that imagery relaxation has been an effective relaxation technique used to treat a variety of conditions with different populations. After reviewing the imagery component of relaxation it seems like there needs to be a continuation in the investigation as to how imagery relaxation can be effective across different populations and problems.

Muscle relaxation has been an effective relaxation technique used, along with others mentioned above, to treat a variety of conditions within different populations. It has helped with increasing quality of life, reducing rates of anxiety, increasing frustration tolerance, and decreasing behavioural disturbances. It also is cost-effective. With all these positive results from application of muscle relaxation, it only makes sense to continue on with its application to various populations and conditions.

After review of the literature it is apparent that relaxation therapy and the use of specific relaxation techniques are an effective form of treatment. Relaxation therapy and the use of relaxation techniques have been applied to a variety of populations in order to treat a variety of conditions. The number of studies which have investigated the use of relaxation techniques with an acquired brain injury population is minimal. Considering that relaxation therapy and the use of relaxation techniques have been helpful in treating a variety of conditions within a variety of populations including the acquired brain injury population, it is crucial to expand on the literature. This leads to the importance of an examination to determine how relaxation therapy can increase the knowledge of relaxation, the use of relaxation techniques, and the level of relaxation in the everyday life of an individual with an acquired brain injury.
Chapter III: Methodology

Participants

This study included one participant, a male adult with an acquired brain injury, living within a residential setting agency. Input from staff within the agency on which client would most benefit from a RT program influenced the choice of participant.

Robert was a 47-year-old, white male adult with an acquired brain injury who suffered a severe traumatic brain injury as the result of a fall from a building while travelling in England. The injury occurred in 1986 and at the time he was 25-years-old. In 1988, he became a client of the agency. In 2004, he suffered a second brain injury that affected his balance and mobility in addition to the results of his first injury.

Prior to Robert’s first brain injury, he had completed grade 12 and one year at university. His mother claims that he had learning difficulties in school. He was also said to be depressed preceding his injury. Robert was unemployed for two years before his injury and had been travelling to Australia and England during that time. His employment history is erratic, but involved carpentry for a short period.

Currently, Robert lives in a four room unit within an apartment building where 24 hour supervision is provided by the agency. He has 3 other roommates who share the unit with him. Staff members are also present at all times within the home.

Personal care or financial decisions for Robert are made with the help of his mother. His mother is very involved in his life through regular visits, financial assistance, and support. He also has frequent contact with his sister who lives in Toronto with her husband. Robert’s father died in 1990 from a heart aneurysm. Robert has a girlfriend who he spends time with weekly.

He takes a variety of medications daily. These medications include Benzodiazepines, Sertraline, Wellbutrin, Zyprexa, Emo Cort, Lyderm, Lamisil, Centrum Forte Multivitamin, Aspirin Daily Low-Dose, and Lipitor. These medications help with anti-convulsing, mood/behavioural control, and dry skin or rashes.

Robert has a tracheotomy-scar, right elbow scar, midline abdominal scar, appendix scar, scar on right thigh, scar on left calf, and scar on his coccyx. He uses a walker for balance, wears a brace on his left foot and has customized orthopaedic lifts in both shoes. Without shoes and/or walker, Robert is prone to falling and has injured himself as a result of falls in the past.

Robert also requires regular supervision with cleaning, problem solving, and daily orientation. Due to the nature of the traumatic brain injury, he has difficulty with short-term verbal and visual memory, although he has good awareness of this and uses a day timer and other aids quite successfully. Robert has trouble with impulsivity and has difficulty organizing himself, especially when he becomes frustrated or anxious. His
abstract reasoning is impaired; therefore he requires guidance in judgement and decision making. Robert does well with written notes and breaking things down into steps or parts. He has difficulties with attention and concentration and therefore requires frequent reminders of tasks and instructions. Robert sometimes rushes through tasks to impress others with his speed but as a result he will make errors. He responds well to structure, routine and indirect suggestions that can help him problem solve. He easily becomes frustrated and angry if demands are placed on him or if he perceives he is being told what to do. Robert has a fixed amount of money that he receives per day and at times he will want to take extra out of his financial binder to make daily personal purchases on things such as lotto tickets or coffee. Robert actively participates in a variety of programs everyday throughout each week. He also takes pride in his appearance and appreciates compliments when he is well groomed and dressed.

Robert has several strengths and resources in his life. His strengths include his woodworking skills, his organizational skills, his polite manners, and his hygienic behaviours. He also has strengths in recalling special events or dates, sports trivia, computer games, music, dancing, and exercising. Robert actively participates in programs such as “Card Sharks”, mentoring, and bowling where he excels. Robert’s social support network includes his access to all staff and clients within the agency, family, and his girlfriend.

Currently he has counselling sessions with a clinical social worker. He has continuously had troubles with agitated behaviour over the past years. Previous techniques or interventions developed to alter his behaviour were not successful. There is no known history of other behavioural programs that have been developed for him.

The staff within the agency have experienced continuous difficulties in the past trying to prevent or counteract Robert’s agitated behaviour, especially around certain situations. Assistance in developing a RT program that can help Robert prevent or replace his agitated behaviour with the use of relaxation techniques, especially around certain routines such as banking or wood working, was requested.

Informed consent from Robert was obtained before he was able to begin participating in the study. This was done with the use of an informed consent form (Appendix A).

**Design**

A pre-post test design was used to assess the effects of the RT program. The RT program was primarily delivered by the research observer; however, staff were educated in team meetings on how the program worked and were provided with instructions to help promote consistency throughout the course of the program. Specifically, Robert’s primary worker was trained in how to conduct the RT program so she would be able to provide further training following program completion to other staff if required or requested. The RT program focused on increasing Robert’s skills in being able to relax himself, which was defined as closing his eyes for 5 seconds, taking deep breaths for 5 seconds, or tensing and relaxing his muscles. After the RT program began, agitated...
behaviour was a focus as well which was defined as Robert pacing, pursing his lips, muttering under his breath, talking to himself, asking many different questions in quick succession, shaking his walker, gripping his handles on his walker tightly, clenching his fists, or becoming non attentive where you cannot get his attention.

Setting and Apparatus

The study was primarily conducted in Robert’s room that was located within his shared apartment. The room consisted of typical room furniture such as a bed, dresser, side tables, and chairs. The RT program sessions were all done in Robert’s room. This primary room setting was chosen because it seemed most appropriate for the type of study. The study focused on learning about and practicing relaxed behaviour and relaxation techniques. It only seemed right to have the sessions in a relaxed environment. This was a relaxed environment that Robert was familiar with where he could feel comfortable, could be free from distractions, and where he could be given the opportunity to focus on the content of the RT program sessions.

A component of the RT program involved applying what was learned and practiced in the RT program sessions in real world situations. Planned practice took place in a variety of settings including the common area in the apartment, the kitchen, anywhere in the apartment building or outside of the building, and in other settings Robert entered throughout his daily routines (bank, the woodworking shop, bowling alley, the agency head office, etc). The RT program strongly encouraged the practice of relaxation across most of the settings Robert encountered throughout his day.

The equipment used included the furniture within Robert’s room and other settings. It also included the use of Robert’s RT binder that contained all the materials or content required for all the RT program sessions. In addition, a pen or pencil was always present in order to answer questions within the sessions or to complete what was required in the RT binder. A clock was present in Robert’s room that was used to keep track of the length of the sessions.

Measures

Various measures were used as assessment instruments in this study. These measures included a reinforcement questionnaire (Appendix B), self-report relaxation questionnaire (Appendix C), relative-report relaxation questionnaire (Appendix D), staff-report relaxation questionnaire (Appendix E), and a relaxation rating scale (Appendix F). Throughout the study, Robert completed questions within the RT program that displayed his knowledge of relaxation and the use of relaxation techniques (Appendix G). A research observer recording sheet was used as a measure of training effectiveness (Appendix H).

Reinforcement Questionnaire. The reinforcement questionnaire included 5 questions that were developed by the research observer. All of the 5 questions were open-ended where Robert was able to freely elaborate on his answers. These questions were
designed to gain ideas on what type of things could be used to motivate Robert to participate actively in the RT program (Appendix B).

**Relaxation Questionnaires.** The self-report, relative-report, and staff-report relaxation questionnaires were also developed by the research observer to gain information on Robert’s knowledge and use of relaxation techniques. The questionnaires were made up of 5 questions each that related to the knowledge of and use of relaxed behaviour. The type of questions included 2 “yes” or “no” questions and 3 five-point-Likert scale questions. All three questionnaires were the same, except there was some variation for the self-report questionnaire. If Robert answered “yes” to the 2 questions he was asked to further display his knowledge through performance by writing out the answer. These questionnaires are located in Appendices C, D, and E.

**Relaxation Rating Scale.** The relaxation rating scale used was adapted from *MindMasters.* (need author and year for citation—and include in references) This was a 5-point-Likert scale that measured Robert’s level of relaxation before and after the RT program sessions (Appendix F).

**Content of Relaxation Therapy Sessions.** The content within the RT program sessions were kept in Robert’s RT binder. These questions were mostly open ended questions and were completed throughout each RT program session (Appendix G).

**Research Observer Recording Sheet.** Finally, a research observer recording sheet was used to measure the effectiveness of the RT program (Appendix H). The purpose of the recording sheet was to gain information surrounding Robert’s relaxed behaviour, agitated behaviour, the “survivor” prompt (later explained in the procedures section) and verbal praise. The sheet collected the following data: the date, the time, whether or not Robert displayed agitated behaviour, whether or not the “survivor” prompt was delivered, whether or not Robert displayed relaxed behaviour after receiving the “survivor” prompt, and whether or not he was verbally praised after engaging in relaxed behaviour. Besides the date and time, data was recorded based on a yes or no answer (Y=Yes and N=No). There were also two other columns for comments surrounding the specific recording and for staff initials. Comments were not always necessary. This data sheet was developed by the research observer. Further details in regard to the intervention are discussed later.

**Justification of Measures.** The measures used were chosen based on certain circumstances related to the uniqueness of the client and his capabilities. The questionnaires were developed and individualized based on Robert’s cognitive abilities. Most standardized questionnaires were too advanced or did not target what needed to be assessed. Therefore, the research observer developed the questionnaires specifically for the purpose of the study. This being said, standardized questionnaires were reviewed to assist in the development of the questionnaires used. Prior to use of the questionnaires, several were reviewed and approved by neuropsychologists, cognitive behavioural facilitators, and senior residential facilitators. The questions answered and documented in the RT program sessions were used to assess his knowledge and understanding of the relaxation techniques being taught and practiced because it was concrete and crucial.
element of the intervention. Also, the research observer recording sheet was developed to assess the effectiveness of the intervention after the intervention began. Prior to use of the recording sheet, it was reviewed and approved by the agency’s cognitive behavioural facilitator.

Procedures

**Informed Consent.** Informed consent procedures were immediately brought to the agency’s attention before completing initial assessments or beginning the RT program. An informed consent form (Appendix A) was developed specifically for the RT program and contained all details related to Robert’s participation. The informed consent form was reviewed and approved by the Research Ethics Board of the agency, the agency neuropsychologist and supervisors, and the college supervisor. Before informed consent was obtained by Robert, Robert’s service coordinator contacted his mother to obtain informed consent by reading the informed consent form to her over the phone. The procedure of contacting Robert’s mother was not required but the agency has frequent contact with Robert’s mother and wanted to ensure she was aware of the RT program before it began. Robert’s consent was obtained with the use of the informed consent form. Robert had the informed consent form read to him, it was explained in further detail, and all questions pertaining to the informed consent were answered. Robert signed the informed consent form and was given a copy of the form for his records. In this case, oral consent was also given. All informed consent procedures were followed and completed before starting the RT program.

**Assessment.** Assessment procedures were followed prior to implementation of the RT program, the intervention. This involved scheduling a time to review Robert’s case file and conducting interviews to obtain the information required for the questionnaires.

**Relaxation Therapy Program.** The intensified RT program continued for a period of 5 weeks. Initially, Robert was provided with an outline of the RT program sessions and was given an idea of what would be covered throughout the RT program sessions (Appendix I). Throughout the 5 weeks, there were 4 RT program sessions a week with Robert. This made a total of 20 sessions. On Mondays, there was two 15-20 minute sessions, one in the morning and one in the afternoon. These sessions covered the main content of the RT program. The main content included the use of deep breathing, imagery relaxation, and muscle relaxation. The other two weekly sessions were on Wednesday and Friday mornings for 5-10 minutes in length. These short sessions were periods to review the content previously covered and to encourage continued use of the relaxation techniques in Robert’s everyday life. Each session took place in Robert’s room which was a safe and controlled environment. Robert was provided with a RT binder that contained the content and homework for each session. Appendix G displays the content and homework for each session. After the relaxation techniques had been taught and practiced, application of the techniques outside of Robert’s room was emphasized. A word chosen in one of the initial RT program sessions was used to serve as a prompt or cue for Robert to engage in the use of relaxation techniques. Anytime Robert displayed the use of relaxed behaviour or relaxation techniques, he was verbally praised. All
intervention procedures and the content of the sessions were developed and based on Robert’s level of comfort in moving forward throughout the RT program sessions.

*Relaxation Therapy Binder and Relaxation Techniques.* Robert was given a RT binder that was used throughout each RT program session and kept in his room. The binder contained information in regard to the RT program such as Robert’s copy of the informed consent form, the schedule of sessions, an introduction to the RT program, the main content of the sessions, relaxation rating scales completed by Robert, and finally a summary of the RT program. There was also a section devoted to staff for maintenance purposes so they could easily conduct RT program sessions, with the use of simple instructions, in the future. The main content of the binder included RT program sessions related to three specific relaxation techniques. These three specific relaxation techniques included the use of deep breathing, imagery relaxation, and muscle relaxation. Questions, general information, and application guidelines in regard to the use of each relaxation technique was enclosed within the main content of the sessions and binder. To be more specific, this binder included pictures along with steps on what each of the three relaxation techniques entailed (Appendix G). During each session, after the specific relaxation technique was explained and discussed, Robert practiced the relaxation technique to ensure he was able to display the technique correctly and reach a state of relaxation. Robert was able to access his RT binder and practice the relaxation techniques freely whenever he wanted or needed to.

*Relaxation Rating Scales.* After each session, Robert was presented with a relaxation rating scale where he was able to rate his level or state of relaxation before and after engaging in the use of the relaxation techniques that were the focus of each session (Appendix F). These relaxation rating scales were kept in Robert’s RT binder and a total of four were completed each week, after each RT program session.

*Verbal Prompt and Praise.* Robert chose a word in one of the initial RT program sessions that was used to serve as a prompt or cue for Robert to engage in the use of relaxation techniques. The word chosen was “survivor”. This word “survivor” was used in each session to prompt Robert to engage in the use of the relaxation techniques. When Robert heard the word “survivor” he would know that it was a sign for him to use his relaxation techniques. Later the word “survivor” was used outside of the sessions, in real life situations. This was done to serve as a discriminative stimulus for the use of relaxation techniques and to also help with generalization. It was a discrete way to remind Robert to engage in relaxed behaviour and there was the understanding that Robert was fully participating in the RT program and knew exactly what the word “survivor” meant. Initially the research observer was the only one who would deliver the prompt by saying the word “survivor”. As the RT program progressed, Robert would say “survivor” out loud to himself, which served as a self mediated prompt for him to use his relaxation techniques. Anytime Robert responded to the “survivor” prompt, by using the relaxation techniques, he was verbally praised by the research observer. Staff would naturally provide verbal praise whenever Robert displayed relaxed behaviour as well.
The verbal prompt was delivered randomly. The random delivery of the verbal prompt was most often made during Robert’s typical daily routine situations or when he was engaging in agitated behaviour. The verbal prompt was delivered in an informal and unrestricted way. Verbal praise was delivered on a continuous reinforcement schedule. Robert was always praised following the display of relaxed behaviour.
Chapter IV: Results

Baseline Assessment Results

**Reinforcement Questionnaire.** Robert completed a reinforcement questionnaire that helped determine what things Robert liked that could possibly be used in the RT program to help motivate him. As a result of the reinforcement questionnaire (Appendix J), it became obvious what activities Robert enjoys, who he enjoys spending time with, what programs he likes best, what he does for fun, and what he particularly dislikes.

**Self-Report Relaxation Questionnaire.** Robert scored 65% on the self-report relaxation questionnaire completed prior to intervention. This score makes it apparent that Robert does have knowledge in regard to relaxation and the use of relaxation techniques, however, the knowledge he has is not exactly concrete or specific. Robert reported that he sometimes uses relaxation techniques and he sometimes finds it easy to relax. Table 1 displays statistics comparing the results of the self-report relaxation questionnaires to the others.

**Relative-Report Relaxation Questionnaire.** Robert’s mother completed the relative-report relaxation questionnaire prior to the start of the RT program. The score obtained on this relative-report relaxation questionnaire was 40%. A score of 40% illustrates how much knowledge in regard to relaxation and the use of relaxation techniques that Robert’s mother thinks he exhibits. Table 1 displays the results of the relative-report relaxation questionnaires as compared to the results of other questionnaires that were administered.

**Staff-Report Relaxation Questionnaire.** The cognitive behavioural facilitator for the agency residence completed a staff-report relaxation questionnaire prior to the beginning of relaxation therapy program. The score on this questionnaire was 45%. Based on the questionnaire, it seemed that Robert needed more knowledge in regard to relaxation techniques. It also appeared that his daily use of relaxation techniques is minimal. Table 1 displays statistics comparing the results of the staff-report relaxation questionnaires to the others.

Table 1: *Table of Scores for Self-Report, Relative-Report, and Staff-Report Relaxation Questionnaires During Baseline.*

<table>
<thead>
<tr>
<th></th>
<th>Self</th>
<th>Relative</th>
<th>Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>25</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Q2</td>
<td>100</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Q3</td>
<td>100</td>
<td>25</td>
<td>75</td>
</tr>
<tr>
<td>Q4</td>
<td>50</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Q5</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Mean Scores</td>
<td>65</td>
<td>40</td>
<td>45</td>
</tr>
</tbody>
</table>
Intervention Assessment Results

**Self-Report Relaxation Questionnaire.** Robert scored 85% on the post self-report questionnaire compared to his score of 65% on his pre-self-report questionnaire results. This is an increase in his knowledge of relaxation and use of relaxation techniques by approximately 1/3. Table 2 illustrates the statistics in regard to Robert’s pre and post self-report relaxation questionnaire scores. It is evident that Robert had statistically significant improvements in his knowledge and use of relaxation techniques.

Table 2: *Table of Scores for Robert’s Pre and Post Self-Report Relaxation Questionnaire Scores.*

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>25</td>
<td>100</td>
</tr>
<tr>
<td>Q2</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Q3</td>
<td>100</td>
<td>75</td>
</tr>
<tr>
<td>Q4</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Q5</td>
<td>50</td>
<td>50</td>
</tr>
</tbody>
</table>

**Relative-Report Relaxation Questionnaire.** This form of assessment was not completed after intervention which is later discussed.

**Staff-Report Relaxation Questionnaire.** This form of assessment was not completed after intervention which is later discussed.

**Relaxation Rating Scales.** The data collected from Robert’s reporting on the relaxation rating scales revealed that the relaxation techniques were helpful in increasing his level of relaxation (Appendix K). In Table 3, the calculations of mean, median, and standard deviation in regard to the relaxation rating scales displays how Robert’s reported level of relaxation significantly increased after engaging in the relaxation techniques within the RT program sessions.

Table 3: *Table of Calculations for Robert’s Self-Reported Level of Relaxation on the Relaxation Rating Scale Before and After Relaxation Therapy Program Sessions.*

<table>
<thead>
<tr>
<th></th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>46</td>
<td>98</td>
</tr>
<tr>
<td>Median</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td>SD</td>
<td>0.12</td>
<td>0.0683</td>
</tr>
</tbody>
</table>
Figure 1 displays the dramatic increases in Robert’s levels of relaxation before and after practicing the relaxation techniques. The difference in his level of relaxation before and after practicing the relaxation techniques is significant. His level of relaxation before use of the relaxation techniques was at an average level of 48% and then jumped to the level of 98% which is an apparent increase in Robert’s level of relaxation.

Content of Relaxation Therapy Program Sessions. Through the use of open ended questions, the answers recorded, and homework completed it was evident that Robert was able to understand and practice the content of the RT program sessions effectively. This also showed the increase of knowledge and use of relaxation techniques in his everyday life. Refer to Appendix Q to see the results of the content completed throughout the RT program sessions.

Research Observer Recording Sheet. The data collected from the research observer recording sheet showed that Robert had a great response to the RT program (Appendix M). The data displays the specific details illustrating how effective the “survivor” prompt was and how well he responded. It also showed interobserver reliability where the research observer and staff were both tracking Robert’s behaviour. Staff will continue recording data with the use of the recording sheets to produce further records in regard to the effectiveness of the RT program. Table 4 shows the statistically significant effects of the RT program. The chart calculates the percentages of how often
Robert was engaging in agitated behaviour, responding to the “survivor” prompt, engaging in relaxed behaviour, and being verbally praised. These calculations were made across the period of 5 days to show how Robert was actively responding and how effective the RT program was for Robert.

Table 4: Table of Calculations for Research Observer Recording Sheet.

<table>
<thead>
<tr>
<th></th>
<th>Agitated Behaviour</th>
<th>“Survivor” Prompt</th>
<th>Relaxed Behaviour</th>
<th>Verbal Praise</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>67</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>D2</td>
<td>58</td>
<td>92</td>
<td>92</td>
<td>92</td>
</tr>
<tr>
<td>D3</td>
<td>100</td>
<td>89</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>D4</td>
<td>100</td>
<td>50</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>D5</td>
<td>91</td>
<td>91</td>
<td>89</td>
<td>89</td>
</tr>
<tr>
<td>Combined</td>
<td>83.2</td>
<td>84.4</td>
<td>89.75</td>
<td>87.75</td>
</tr>
</tbody>
</table>

Figure 2 also shows that the RT program was successful where the “survivor” prompt had stimulus control in producing relaxed behaviour. It shows how the prompting easily produced relaxed behaviour which increased Robert’s daily use of relaxation techniques. On day 4, there is a decrease in the daily percentages of “survivor” prompt sequences completed and this may be due to several uncontrolled variables. It is likely that Robert was not given a great opportunity to respond to the prompt that day if it was not being delivered based on certain circumstances.

Figure 2. Graph of Robert’s Daily Percentages of “Survivor” Prompt Sequences Completed
Chapter V: Discussion

General Discussion

The RT program, which had been implemented for a period of 5 weeks, was effective in increasing Robert’s knowledge of relaxation, use of relaxation techniques, and level of relaxation in his everyday life.

The self-report relaxation questionnaire completed prior to and after the RT program showed great improvements in regard to Robert’s knowledge of relaxation techniques and use of the relaxation techniques daily. The relative-report and staff-report questionnaires were not implemented after the RT program due to implications that occurred during the first interviews. The implications that arose are further discussed later.

The relaxation rating scale used after each RT program session revealed that the relaxation techniques were helpful in increasing Robert’s level of relaxation (Appendix K).

Throughout the RT program sessions, Robert completed weekly work in regard to his knowledge and use of relaxation techniques. This work was stored in his RT binder. This data contained in his RT binder showed that Robert was actively participating throughout each session and showed increased knowledge and use of relaxation techniques daily (Appendix L).

The data collected from the research observer recording sheet shows that Robert had a response to the RT program (Appendix M). It also showed interobserver reliability where the research observer and staff were both tracking Robert’s behaviour. Staff would continue recording data with the use of the recording sheets to produce further records in regard to the effectiveness of the RT program.

Maintenance, Generalization, Follow-Up

The RT program was designed to continue in intensity for a 5-week period. The 5-week time period involved Robert learning about relaxation techniques, practicing relaxation techniques, and applying the use of the relaxation techniques in daily real life situations, especially in the situations where agitated behaviour would occur or were likely to occur. Generalization was built into the program from the beginning where he would be encouraged to apply his relaxation techniques daily outside of the RT program sessions. Over the course of the RT program there was only one mediator, the research observer, who conducted the RT program sessions and encouraged Robert to apply what he had learned and practiced in daily real life situations where the use of relaxation techniques could have been helpful to him. Therefore, initially only the research observer would use the “survivor” prompt to cue Robert to engage in relaxed behaviour. The use of the prompt naturally generalized to Robert saying “survivor” himself to trigger himself to use relaxation techniques.
In order to maintain the results of the RT program it was crucial to transfer the essentials of the program over to the immediate staff that would interact with Robert on a daily basis. The staff were also the ones who regularly became aware of Robert’s agitated and who were the ones aware of situations that may trigger his agitated behaviour to occur. The staff were provided with instructions and scripting in how to continue on with the RT program (Appendix N). The staff were expected to use the “survivor” prompts with Robert and would verbally praise him for engaging in relaxed behaviour. Staff were also to use the “survivor” prompt randomly as a way to prevent or counteract Robert’s agitated behaviour. Anytime Robert displayed relaxed behaviour, he was verbally praised. The staff participation helped maintain Robert’s use of relaxation techniques and also helped generalize the occurrence of relaxed behaviour in various real life situations, especially where staff were present to provide the “survivor” prompt. Overtime, Robert should have noticed the positive effects of the relaxed behaviour such as the feeling of being less agitated, the feeling of having power over his agitated behaviour, and the feeling of social acceptance he would be receiving from verbal praise delivered contingent on his display of relaxed behaviour. All of these positive effects should serve as natural reinforcers for him choosing to engage in relaxed behaviour rather than agitated behaviour. Formally based on the procedures provided to staff (Appendix N), Robert would be reviewing his relaxation techniques on Monday, Wednesday, and Friday mornings. Robert should be encouraged to review his RT binder whenever or on an as needed basis. If anytime a staff feels that Robert requires a refresher of the relaxation techniques, he could be directed to his RT binder or staff could take the time to review the binder or relaxation techniques with Robert to encourage the continuation of relaxed behaviour. The program would be maintained where staff were able to use the “survivor” prompt to help Robert engage in relaxed behaviour which would help him prevent or cope with his agitated behaviour. Staff would continue monitoring Robert’s relaxed and agitated behaviour with the use of the data recording sheet. The recording sheet would help to determine if the “survivor” prompt was continuing to generate relaxed behaviour along with other information related to the target behaviours.

With the consideration of the research observer leaving the agency after the short period of time, the RT program was designed to continue on within the agency. After two months, the agency was contacted to see if staff was maintaining the use of the RT program with Robert. It was reported from the cognitive behavioural facilitator that the program was maintained and Robert’s primary worker was spending time training new staff and so on. She also reported that staff continued with the use of the word “survivor” and that Robert was still responding well. It appeared that it was still effective with Robert. The cognitive behavioural facilitator mentioned that sometimes it is hard to maintain programs when there are changes in staff, but ensured that she would make sure new staff were trained on the RT program because of the positive effects it has had on Robert. The final thing she mentioned was that the overall RT program was a great success and in general Robert has been getting the attention he deserves.
**Strengths and Limitations**

There were strengths and limitations to the RT program. The strengths included Robert’s increased knowledge of relaxation, use of relaxation techniques, and levels of relaxation. Robert was able to successfully spend time learning about and practicing relaxation techniques. Robert’s increased use of relaxation techniques appeared to be helpful in preventing or counteracting his agitated behaviour. It is hoped and predicted that Robert would be able to continue on with his use of relaxation techniques, especially in situations where they could be extremely helpful to him. Robert fully participated and appeared to enjoy the RT program. It was good how the RT program sessions were designed to be flexible based on the individual client. Ultimately, it seemed that Robert extremely benefited from the RT program.

A clear limitation was the lack of time for implementation of the RT program. There was a struggle in determining the best way to measure Robert’s behaviour prior to implementation of the RT program. Also, with the use of the research observer recording sheet there was a lot of information collected that wasn’t analyzed or necessary to collect. Robert spent a lot of time out of the residence or in the community where there was limited time spent with him. There also should have been more time spent in transferring the program over from the placement student to the staff.

**Program Changes**

There were various changes that could have been made to the RT program in order to help it be more effective along with scientific.

In regard to the assessment methods used there were implications that arose. The relative-report relaxation questionnaire was difficult for Robert’s mother to complete. It appeared that she was unsure of how to answer the questions and she reported that she didn’t have much knowledge of Robert’s knowledge or use of relaxation techniques. The staff reported that she found the staff-report relaxation questionnaire difficult to complete. The questions were difficult for her to answer and she suggested for it to be revised, therefore, the questions may have been misinterpreted or confusing. Even though these questionnaires were approved prior to their use, they were not used post intervention due to the initial implications. Therefore, it was unfortunate that the data collected was limited in regard to the questionnaires used. In the future, the questionnaires should be more concrete, systematic, or alternate assessment methods should be used.

There was limited time to conduct the baseline assessments which made it more difficult to prove the success of the RT program based on the assessment results. If there was more time to conduct baseline assessments prior to the implementation of the RT program, it could have been proven more effective and scientific. There were changes in the assessments as the RT program progressed. A research observer recording sheet was implemented after the RT program started. This data recording sheet was used to measure the effects of the intervention but there should have been a data sheet implemented prior
to the RT program starting. There were also difficulties in trying to encourage the staff to record data.

**Multilevel Challenges**

The focus of this report is on the challenges faced when implementing a behavioural program for an acquired brain injury population within a residential setting.

**Client Level.** A behavioural or counseling program for individuals with an acquired brain injury should be specific to their needs. The RT program had to be adapted to the client’s level and needs. The RT program designed for the client was greatly structured, however, it needed to be modified at times to be less formal and to help keep the client engaged.

**Program Level.** At the program level, the RT program should be incorporated into a client’s everyday life and routines. The client who participated in the RT program was always extremely busy, out in the community, so this may have impacted the success of the RT program. The client was only able to participate in the RT program at rare and certain times.

**Organization Level.** The organization was supportive of the RT program but made little contributions to the implementation of the RT program. The RT program may have been more effective if all staff and the organization were participating in the program throughout. The RT program was transferred over to the agency so it is hoped that they maintain the RT program procedures. It really takes having the support of the organization to help with the continued success of a behavioural program. There is a strong possibility that staff may not continue on with the RT program but hopefully they do. It is crucial to use behavioural technology to modify the staff behaviour.

**Societal Level.** On a societal level, it is hoped that the client applies what was learned from the RT program in the community. It may be difficult to apply what was learned through the relaxation therapy in real life situations because the community is not the same structured environment that the RT program took place in. There may also be certain stimuli in the community that can’t be controlled. An individual with an acquired brain injury needs support from society as a whole to be successful. If the support is not there, it would be easy to fall back into the practice of maladaptive behaviours. All these factors can contribute to the challenges of service implementation.

**Summary and Recommendations**

In conclusion the RT program was successful in increasing Robert’s knowledge of relaxation, use of relaxation techniques, and level of relaxation in his everyday life. However, these results would have been a lot more reliable if more concrete ways of measuring the behaviours were used from the beginning to end. The RT program could have put more emphasis on self initiation of the relaxation techniques so Robert would not need others to prompt him to engage in the relaxed behaviour. It would be
recommended that the program continue in intensity for a longer period of time, that more time is spent on maintenance and generalization, and there be a more clear way of collecting data throughout the entire study. Overall, it appears that the RT program was a great success.

**Contribution to Behavioural Psychology Field**

This study contributed to the behavioural psychology field by displaying the effectiveness of RT program in a male adult with acquired brain injury. It easily portrays how a RT program such as the one used can be individualized to address problems one experiences in life and how it can help to improve an individual's quality of life in general. The RT program used does not have to be solely used with the acquired brain injury population but could be used and applied across a variety of populations to address a variety of conditions in the field of behavioural psychology.

**Recommendations for Future Research**

For future research it would be recommended that the study or program be continued for a longer period. The intervention could also be replicated with more participants. The results would be strengthened if more assessment methods were used. It is important that any RT program be individualized to the specific client or participant and that it addresses their needs. All RT programs should be designed based on the client’s or participant’s unique capabilities.
References


Appendix A: Informed Consent Form

Dear RT Participant,

I am a student in the Bachelor’s Degree in Behavioural Psychology program at St. Lawrence College. This four-year degree program is based on a behavioural framework, which has been demonstrated to be effective in developing positive skills with a wide range of individuals. Currently, I am completing an Applied Thesis that involves a project that I will summarize in a written report.

My project will be relaxation therapy that will include completion of self-report questionnaires, learning about and practicing relaxation techniques, role-plays, and doing homework related to relaxation techniques. It will also include you, your mother, and staff members taking pre and post questionnaires for assessment purposes. Data based on daily activities such as banking will be recorded. The relaxation therapy will involve meeting for two separate 20 minute sessions on Mondays, a 10 minute session on Wednesdays, and another 10 minute session on Fridays. The sessions are expected to continue for a 6 week period. This client-focused project will be developed in collaboration with you, the agency’s staff, and team members.

The potential benefits of participating in this project involve the development of relaxation techniques and proper use of relaxation techniques. The foreseeable risks of participating in this project are minimal. The minimal risks would include exploration of events or situations where one is not in a relaxed state. During each session, CHIRS staff will be available for support if it is required.

This project has been approved by CHIRS, Dr. Carolyn Lemsky, Dr. Clare Bradys, Alex Piotti, and by the Research Ethic Board at St. Lawrence College. The project will be developed under the supervision of Dr. Deborah Smith, my supervisor from St. Lawrence College and in collaboration with Dr. Carolyn Lemsky, Dr. Clare Brandys, and Alex Piotti of CHIRS.

I would like your permission to implement the intervention/procedures described above. All information collected will be kept strictly confidential. The information will be coded and stored in a locked cabinet. Upon request, we will gladly share a copy of a brief report of the intervention. Participation in this project is voluntary and you may withdraw at anytime without incurring undue biases to current or future treatment.

If you agree to participate in the project, please complete the form at the bottom of this letter and return it to me as soon as possible. A copy of this signed document will be given to you for your own records.

I sincerely appreciate your cooperation. If you would like to receive more information about the project or have additional questions or concerns, please contact my College Supervisor, Dr. Deborah Smith, 613-544-5400 ext 1442, Dr. Carolyn Lemsky, Dr. Clare Brandys, or Alex Piotti.

Sincerely,

Sarah Downing
St. Lawrence College Student
I, ______________________, being the legally authorized consent giver for ___________,
understand and consent to the following.

I, ______________________, understand and consent to the following.

**NOTE:** all information identifying you will be removed from any reports to protect confidentiality

_____ I consent to participate in the project conducted by Sarah Downing.

_____ I consent for the data collected as part of this project to be put in a report in the college library.

_____ I consent for the data collected as part of this project to be presented at a conference.

_____ I consent for the data collected as part of this project to be published in a peer reviewed journal or professional publication.

Client/Guardian Signature: __________________ Date:________________

Printed Name: ____________________________

Witness Signature: ________________________ Date:________________

Printed Name: ____________________________

SLC Student Signature: ____________________ Date:________________

Printed Name: ____________________________
Appendix B: Reinforcement Questionnaire

Reinforcement Questionnaire

1. What type of activities do you enjoy?

2. Who do you enjoy spending time with?

3. Out of all the programs you attend, which ones are your favourite and why?

4. What do you do for fun?

5. Is there anything that you don’t like or that bothers you?
Appendix C: Self-Report Relaxation Questionnaire

Name: ____________________________ Date: __________________________

Self-Report Relaxation Questionnaire

Please read each sentence carefully. If you agree, circle YES. If you disagree, circle NO.

1. I can list five or more ways to relax.

   YES       NO

   If answer is YES, please list five or more ways to relax.

   1. ____________________________ 2. ____________________________
   3. ____________________________ 4. ____________________________
   5. ____________________________ 6. ____________________________

2. I can identify five or more situations where I should use relaxation techniques.

   YES       NO

   If answer is YES, please list five or more situations when you should use relaxation techniques.

   1. ____________________________ 2. ____________________________
   3. ____________________________ 4. ____________________________
   5. ____________________________ 6. ____________________________

Please answer each question by circling a number based on description.

3. I feel comfortable practicing or using relaxation techniques.

   1  2  3  4  5


4. I take time to focus on relaxation or relaxing at least once a day.

   1  2  3  4  5


5. I can easily relax.

   1  2  3  4  5

Appendix D: Relative-Report Relaxation Questionnaire

Name: ____________________________ Date: __________________________

Relative (Mother)-Report Relaxation Questionnaire

Please read each sentence carefully. If you agree, circle YES. If you disagree, circle NO.

1. Can DM list five or more ways to relax?  
   YES  NO

2. Can DM identify five or more situations when he should use relaxation techniques?  
   YES  NO

Please answer each question by circling a number based on description.

3. How comfortable do you think DM feels practicing or using relaxation techniques?
   
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

4. Does DM use relaxation techniques daily? 
   
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

5. Can DM easily relax? 
   
<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>
Appendix E: Staff-Report Relaxation Questionnaire

Name: ____________________________ Date: __________________________

Staff-Report Relaxation Questionnaire

Please read each sentence carefully. If you agree, circle YES. If you disagree, circle NO.

1. Can DM list five or more ways to relax?
   YES NO

2. Can DM identify five or more situations when he should use relaxation techniques?
   YES NO

Please answer each question by circling a number based on description.

3. How comfortable do you think DM feels practicing or using relaxation techniques?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

4. Does DM use relaxation techniques daily?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>

5. Can DM easily relax?

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
</table>
Appendix F: Relaxation Rating Scale

How did you feel **BEFORE** trying to relax?

- Very stressed
- A little stressed
- In between
- A little relaxed
- Very relaxed

How did you feel **AFTER** relaxing?

- Very stressed
- A little stressed
- In between
- A little relaxed
- Very relaxed
Appendix G: Content of Relaxation Therapy Program Sessions

Welcome To Relaxation Therapy
Let’s Take Some Time to Talk About Relaxation…..

What does relaxation mean to you?

How do you relax?

What do you think about relaxation?

Why would you relax?

When would you use relaxation?

Who should relax?
What is the purpose of relaxation therapy?

- Most relaxation therapy techniques useful to apply in everyday situations. Relaxation techniques help remove the focus of the mind away from stressful thoughts and generate coping techniques.

- The purpose of a relaxation therapy session may be to encourage a more relaxed state that will last after the session is ended. This may not always be possible, but a relaxation therapy session should give the person at least a period of increased relaxation, which may help the person cope in the future.

- The purpose of the relaxation techniques will vary.
How do relaxation therapy techniques work?

- Relaxation therapy techniques seek to relax the body and the mind.
- By relaxing the body and mind, problems may be diminished.
- Relaxation therapy seeks to focus the mind on other things besides problems and stressful thoughts. By removing stressful thoughts, the mind becomes more relaxed. This improved state may last for only the period of treatment. However, this relaxed state may last beyond the treatment and the person will gain better coping abilities to deal with stress and problems.
What are the benefits of relaxation therapy techniques?

Relaxation therapy techniques provide many benefits. Here are some of those benefits:

- Increased emotional well being.
- Development of positive coping strategies.
- Improved breathing.
- Increased ability to deal with problems and stressful situations.
- Improved sleep.
- Increased ability to handle pain.
- Increased energy and productivity.
- Increased self confidence and reduced self blame.
Who Can Benefit from Relaxation Therapy?

Relaxation therapy techniques can benefit everybody. There is not a single person who never feels anxious or stressed, or has certain problems in their life that stop them feeling relaxed. Learning and using relaxation techniques can provide relief, contribute to emotional well-being and give everyone coping strategies for the future.

Are there risks involved in relaxation therapy techniques?

Relaxation therapy techniques are a no-risk treatment for a variety of conditions. It can be used safely in the comfort of your own home without any risk of adverse symptoms.
What types of relaxation techniques exist?

There are different types of relaxation techniques that may be used to relax the mind and the body. Depending on the reason for the relaxation therapy, some techniques may be more appropriate than others. There are also personal preferences to be considered. It is best to use relaxation techniques that you feel comfortable with in order for the maximum benefit to be achieved. Here are some of the most popular relaxation techniques.

- Progressive relaxation. This involves tensing and then relaxing muscle groups.
- Autogenic training. This method involves repeating and concentrating on mental directions until the body achieves the appropriate response.
- Relaxation response. This involves repeating a word or phrase in order to quiet the mind and remove its focus away from problems and stressful thoughts.
- Meditation. Relaxation response is a form of meditation. It involves meditating (or focusing the mind) on something in order to create a relaxed response.

Anything that encourages the body to become more relaxed may be used as relaxation therapy. Some easy relaxation techniques include a relaxing bath, relaxing music or imagining a peaceful setting. Each person should find the relaxation techniques that actually work for them. What reduces stress and anxiety for one person may actually be a stressful situation that aggravates anxiety for another person.
Homework

1) Please write down techniques you currently use to relax.

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________________________________________________________________________

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________________________________________________________________________

2) How many ways do you know how to relax?

________________________________________________________________________

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________________________________________________________________________

3) How often do you take time to relax?

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4) Brainstorm techniques you would be interested in trying that would help you relax.

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________________________________________________________________________
Let’s choose a word or phrase we will use to help you apply relaxation techniques and relax!

IDEAS:

____________________________________
____________________________________
____________________________________
____________________________________

Word/phrase chosen:

____________________________________

• This word or phrase will be used to help you relax.

• Anytime you or others say this word or phrase, it will be a signal to use a relaxation technique to benefit you.

• This word or phrase is important because it will be used a lot to help remind you to relax and use the relaxation techniques you learn.
Deep Breathing

[Image of deep breathing]

[Diagram of respiratory system]

[Diagram of the mechanics of breathing]

The Mechanics of Breathing

- Oxygen enters the lungs during inhalation.
- Diaphragm and rib muscles expand the chest cavity, increasing air pressure inside the lungs.
- Carbon dioxide is released during exhalation.
- The chest cavity becomes smaller, decreasing air pressure inside the lungs.

[Image of breathing space]
What do you know about deep breathing?

- With its focus on full, cleansing breaths, deep breathing is a simple, yet powerful, relaxation technique. It’s easy to learn, can be practiced almost anywhere, and provides a quick way to get your stress levels in check.

- Deep breathing is the cornerstone of many other relaxation practices, too, and can be combined with other relaxing elements such as visual imagery and muscle relaxation. All you really need is a few minutes and a place to stretch out.

- By becoming more aware of your own breathing and taking deep breaths, you can reduce tension and become relaxed.
Deep Breathing Exercise

1. Lie down or sit in a comfortable position, maintaining good posture. Your body should be as relaxed as possible. Close your eyes.

2. Pay attention to your breathing. Place both hands on your abdomen noticing how it rises and falls with each breath.

3. Breathe through your nose.

4. Inhale deeply and slowly through your nose into your abdomen. You should feel your abdomen rise with this inhalation and your chest should move only a little.

5. Exhale through your mouth, keeping your mouth, tongue, and jaw relaxed.

6. Quietly count each outward breath.

7. Notice your breathing gradually slowing throughout the exercise, your body relaxing, and your mind calming.

8. Relax as you focus on the sound and feeling of long, slow, deep breaths.
Feedback on Deep Breathing

Did you enjoy practicing the deep breathing relaxation technique?

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How easy or hard was it to focus on the instructions?

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Do you feel like you achieved an overall state of relaxation?

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________________________________________________________________________
Deep Breathing Tip Sheet

Sit or lay in a comfortable position.

Breathe in deeply, then breathe out and keep doing this.

Count each breath. 1…. 2….. 3…..

Continue for 5 minutes.

Notice your mind and body relaxing.
Deep Breathing: Homework

1) **What is the word or phrase used that will signify to use or practice a relaxation technique such as deep breathing?**

____________________________________
____________________________________
____________________________________
____________________________________

2) **What important things should you do when practicing deep breathing?**

____________________________________
____________________________________
____________________________________
____________________________________

3) **Can you identify situations where you could use deep breathing to help you relax?**

____________________________________
____________________________________
____________________________________
____________________________________

Try to spend at least once a day practicing your deep breathing relaxation technique. Please record the dates and times/situations of when you practiced your deep breathing technique. (Keep deep breathing recording sheet in daily planner)
Deep Breathing: Homework

Try to spend at least once a day practicing your deep breathing relaxation technique. Please record the dates and times/situations of when you practiced your deep breathing technique. (Keep in daily planner).

<table>
<thead>
<tr>
<th>Date</th>
<th>Time/Situation</th>
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<tbody>
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<td>17.</td>
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</table>
Review of Deep Breathing
Imagery
Relaxation
What is imagery relaxation?

- Imagery is a useful skill for relaxing in situations, especially when you are not able to change your environment. It is effective when combined with other relaxation methods such as deep breathing and muscle relaxation.

- You will be aware of how particular environments can be very relaxing, while others can be intensely stressful. The principle behind the use of imagery in stress reduction is that you can use your imagination to recreate and enjoy a situation that is very relaxing. The more intensely you imagine the situation, the more relaxing the experience will be.

- One common use of imagery in relaxation is to imagine a scene, place or event that you remember as safe, peaceful, restful, beautiful and happy. You can bring all your senses into the image with, for example, sounds of running water and birds, the smell of cut grass, the taste of cool white wine, the warmth of the sun, etc. Use the imagined place as a retreat from stress and pressure.

- Scenes can involve complex images such as lying on a beach in a deserted cove. You may “see” cliffs, sea and sand around you, “hear” the waves crashing against rocks, “smell” the salt in the air, and “feel” the warmth of the sun and a gentle breeze on your body. Other images might include looking at a mountain view, swimming in a tropical pool, or whatever you want. You will be able to come up with the most effective images for yourself.
What would you enjoy imagining to help you feel relaxed?
____________________________________
____________________________________
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____________________________________
Imagery Relaxation Exercise

1. Close your eyes, if possible, and begin taking slow deep breaths.

2. Listen to the facilitator and imagine yourself in the scene described.

3. Throughout the exercise notice your body relaxing and your mind calming.

Imagine:

Picture yourself at the beach. The rays of the sun are soft and warm. You hear the sounds of the seagulls and the waves gently rolling. The waves roll in and out, in and out. Each wave makes you feel more and more relaxed. You can feel the cool salt air. You take deep breaths of the air and with each breath, you feel more and more relaxed. You feel safe and calm.
Feedback on Imagery Relaxation

Did you enjoy practicing the imagery relaxation technique?

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________________________________________________________________________

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How easy or hard was it to focus on the instructions?

________________________________________________________________________

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Do you feel like you achieved an overall state of relaxation?

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Imagery Relaxation Tip Sheet

Close your eyes if possible.

Take slow deep breaths.

Use your imagination to picture yourself in a calm scene.

Notice your mind and body relaxing.
Imagery Relaxation: Homework

1) **What is the word or phrase used that will signify to use or practice a relaxation technique such as deep breathing or imagery relaxation?**

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________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2) **What important things should you do when practicing imagery relaxation?**

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________________________________________________________________________

3) **Can you identify situations where you could use imagery relaxation to help you relax?**

________________________________________________________________________

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________________________________________________________________________
Review of Deep Breathing
Review of Imagery
Relaxation
Muscle Relaxation
What is muscle relaxation?

- The process of muscle relaxation involves isolating one muscle group, creating tension for 8 -10 seconds, and then letting the muscle relax and the tension go. For example: take your right hand, tighten it into a fist, and notice what happens. You can feel the muscle tension increase in your hand and up your forearm. The longer you hold it, the more tense it becomes. Continue to hold the tension and now, all at once, relax and let go. Allow your hand to flop down into your lap and notice the difference. The muscles now begin to relax, and the muscle tension just flows away, melts, dissolves, and disappears.

- Whenever you create tension in a muscle and then release the tension the muscle has to relax.

- The key to triggering the relaxation response in this manner is to take charge of the voluntary muscles by tensing them and forcing them into a state of relaxation. Once the muscles relax then the other components of the relaxation response will naturally follow. Soon you become more calm and refreshed.
Muscle Relaxation Exercise

1. Review of exercises before starting.

2. Close your eyes, if possible, and begin taking slow deep breaths.

3. Listen to the facilitator and follow instructions.

4. Throughout the exercise notice your body relaxing and your mind calming.

5. See instructions sheet for muscle relaxation instructions.
Instructions

Sit comfortably in the chair. Pay close attention to how you feel as you begin. Notice any stiffness or tightness. Do you feel tense, agitated, or frustrated? Pay attention to how you feel now because you are going to become more relaxed, and you need a point of comparison.

While sitting quietly and comfortably, slowly inhale and exhale and close your eyes as you do so.

Bend your right hand back at the wrist and briefly hold the tension. Now relax. Notice the difference between tension and relaxation.

Now do the same thing with the left hand. Hold the tension and now relax.

This time tighten both hands into fists and hold the tension. Feel it spread up the arms towards the elbows. Now relax.

Now bend both arms at the elbows and raise your hands up towards your shoulders. Tighten up the muscles in the biceps. Hold it. Feel the tension. Now relax.

These three exercises have used the major muscles in the arms and started them relaxing. If you don’t move them around, they will continue to relax becoming more and more relaxed, and you can forget about them.

Next, turn your attention to your face. For your forehead raise your eyebrows up as far as you can and hold the tension. Now relax.

For your eyes, squeeze the eyelids tightly together. Hold the tension. Now relax.

For your jaw you just bite down and clamp your teeth together. Feel the tension along the jaw. Now relax. These three exercises have helped to relax the face.

For your neck just bend your head forward as if trying to touch your chin to your chest. Feel the tension along the back of the neck and now relax.

For your shoulders just raise them up as high as you can and notice the tension. Now let them drop all at once and relax.

For your stomach you just pull in as if trying to touch your backbone with stomach. Now relax.

With your feet flat on the floor, press down and feel the tension spread up the back of the legs. Now relax.

Concentrate on all your muscle groups and the difference between tension and relaxation. Continue to take deep breaths and imagine a relaxing place or scenery. Feel how your body and mind has become more and more relaxed. When you have reached a full state of relaxation, you can open your eyes.
Feedback on Muscle Relaxation

Did you enjoy practicing the muscle relaxation technique?

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How easy or hard was it to focus on the instructions?

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Do you feel like you achieved an overall state of relaxation?

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Muscle Relaxation Tip Sheet

Close your eyes if possible.

Take slow deep breaths.

Use your imagination to picture yourself in a calm scene.

Go through the process of tensing and relaxing the different muscle groups.

Notice your mind and body relaxing.
Muscle Relaxation: Homework

1) What is the word or phrase used that will signify to use or practice a relaxation technique such as deep breathing, imagery, or muscle relaxation?

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2) What important things should you do when practicing muscle relaxation?

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3) Can you identify situations where you could use muscle relaxation to help you relax?

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4) What are some other relaxation techniques you want to try or know of?

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________________________________________________________________________
Summary of Relaxation Therapy Program
Review of Deep Breathing
Review of Imagery
Relaxation
Review of Muscle Relaxation
What important things do you need to know about deep breathing?

What important things do you need to know about imagery relaxation?

What important things do you need to know about muscle relaxation?
What word is used as a signal for you to use relaxation techniques?

________________________________________________________________________

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Can you identify situations where use of relaxation techniques could be helpful?

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What relaxation technique or techniques would you like to practice today?

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Guidance in Reviewing Relaxation Binder

1. Ask how the use of relaxation techniques has been going.

2. Prompt client to get relaxation binder.

3. Ask what relaxation techniques he has been using and what ones that he has learned and practiced in the past.

4. Go through and review the summary session section and questions.

5. If there is time to practice relaxation techniques, turn to the specific relaxation technique session and follow the relaxation technique exercises.

6. Praise client for use of relaxation techniques and encourage continued use.

7. Have a relaxation rating scale completed where the client reports on state of relaxation before and after practicing relaxation technique.

8. Praise again for doing such a good job and encourage client to continue applying his relaxation techniques daily, especially in certain situations where the relaxation techniques can be helpful.

Thank you!
Appendix H: Research Observer Recording Sheet

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Agitated Behaviour? (Y or N)</th>
<th>“Survivor” prompt delivered? (Y or N)</th>
<th>Relaxed Behaviour? (Y or N)</th>
<th>Verbal praise delivered? (Y or N)</th>
<th>Comments</th>
<th>Staff Initials</th>
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## Appendix I: Outline of Relaxation Therapy Program Sessions

<table>
<thead>
<tr>
<th>Type of Session</th>
<th>Session Content</th>
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</thead>
</table>
| **Session 1: Monday Morning** | **Introduction to Relaxation Therapy Program**  
  - Informed consent, assessments, introduction to relaxation therapy program. |
| **Session 2: Monday Afternoon** | **Review Introduction of Relaxation Therapy Program**  
  - Review of Session 1. |
| **Session 3: Wednesday Morning** | **Review Introduction of Relaxation Therapy Program**  
  - Review of Session 1. |
| **Session 4: Friday Morning** | **Review Introduction of Relaxation Therapy Program**  
  - Review of Session 1. |
| **Session 5: Monday Morning** | **Basic Relaxation Technique**  
  - Word used to prompt the use of relaxation techniques is chosen.  
  - Deep breathing relaxation technique is explained, discussed, and practiced.  
  - Relaxation rating scale completed. |
| **Session 6: Monday Afternoon** | **Review Basic Relaxation Technique**  
  - Review of Session 5.  
  - Relaxation rating scale completed.  
  - Focus is on the application of technique in real life situations. |
| **Session 7: Wednesday Morning** | **Review Basic Relaxation Technique**  
  - Review of Session 5.  
  - Relaxation rating scale completed.  
  - Focus is on the application of technique in real life situations. |
| **Session 8: Friday Morning** | **Review Basic Relaxation Technique**  
  - Review of Session 5.  
  - Relaxation rating scale completed.  
  - Focus is on the application of technique in real life situations. |
| **Session 9: Monday Morning** | **Intermediate Relaxation Technique**  
  - Review of deep breathing sessions.  
  - Imagery relaxation technique is explained, discussed, and practiced.  
  - Relaxation rating scale completed. |
| **Session 10: Monday Afternoon** | **Intermediate Relaxation Technique**  
  - Review of Session 9.  
  - Relaxation rating scale completed.  
  - Focus is on the application of technique in real life situations. |
| **Session 11: Wednesday Morning** | **Intermediate Relaxation Technique**  
  - Review of Session 9.  
  - Relaxation rating scale completed.  
  - Focus is on the application of technique in real life situations. |
<table>
<thead>
<tr>
<th>Session 12: Friday Morning</th>
<th><strong>Intermediate Relaxation Technique</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of Session 9.</td>
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<td></td>
<td>• Relaxation rating scale completed.</td>
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<td>• Focus is on the application of technique in real life situations.</td>
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<tr>
<th>Session 13: Monday Morning</th>
<th><strong>Advanced Relaxation Technique</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of deep breathing and imagery relaxation sessions.</td>
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<tr>
<td></td>
<td>• <strong>Muscle relaxation</strong> technique is explained, discussed, and practiced.</td>
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<tr>
<td></td>
<td>• Relaxation rating scale completed.</td>
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<tr>
<th>Session 14: Monday Afternoon</th>
<th><strong>Advanced Relaxation Technique</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of Session 13.</td>
</tr>
<tr>
<td></td>
<td>• Relaxation rating scale completed.</td>
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<tr>
<td></td>
<td>• Focus is on the application of technique in real life situations.</td>
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<tr>
<th>Session 15: Wednesday Morning</th>
<th><strong>Advanced Relaxation Technique</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of Session 13.</td>
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<tr>
<td></td>
<td>• Relaxation rating scale completed.</td>
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<tr>
<td></td>
<td>• Focus is on the application of technique in real life situations.</td>
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<tr>
<th>Session 16: Friday Morning</th>
<th><strong>Advanced Relaxation Technique</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of Session 13.</td>
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<tr>
<td></td>
<td>• Relaxation rating scale completed.</td>
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<tr>
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<td>• Focus is on the application of technique in real life situations.</td>
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<tr>
<th>Session 17: Monday Morning</th>
<th><strong>Generalization of Relaxation Therapy Program</strong></th>
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<td></td>
<td>• Review of deep breathing, imagery relaxation, and muscle relaxation sessions.</td>
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<td></td>
<td>• Relaxation rating scale completed.</td>
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<td></td>
<td>• Focus is on the application of all techniques in real life situations.</td>
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<tr>
<td></td>
<td>• Staff begins to use prompt.</td>
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<th>Session 18: Monday Afternoon</th>
<th><strong>Generalization of Relaxation Therapy Program</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of deep breathing, imagery relaxation, and muscle relaxation sessions.</td>
</tr>
<tr>
<td></td>
<td>• Relaxation rating scale completed.</td>
</tr>
<tr>
<td></td>
<td>• Focus is on the application of all techniques in real life situations.</td>
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<tr>
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<td>• Staff begins to use prompt.</td>
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<tr>
<th>Session 19: Wednesday Morning</th>
<th><strong>Generalization of Relaxation Therapy Program</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of deep breathing, imagery relaxation, and muscle relaxation sessions.</td>
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<tr>
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<td>• Relaxation rating scale completed.</td>
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<tr>
<td></td>
<td>• Focus is on the application of all techniques in real life situations.</td>
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<td>• Staff begins to use prompt.</td>
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<tr>
<th>Session 20: Friday Morning</th>
<th><strong>Generalization of Relaxation Therapy Program</strong></th>
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<tbody>
<tr>
<td></td>
<td>• Review of deep breathing, imagery relaxation, and muscle relaxation sessions.</td>
</tr>
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<td>• Relaxation rating scale completed.</td>
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</table>
- Focus is on the application of all techniques in real life situations.
- Staff begins to use prompt.
Appendix J: Reinforcement Questionnaire Results

Reinforcement Questionnaire

1. **What type of activities do you enjoy?**
   
   - Woodworking, playing cards, attending programs, going out for coffee, going to church.

2. **Who do you enjoy spending time with?**
   
   - My girlfriend and family.

3. **Out of all the programs you attend, which ones are your favourite and why?**
   
   - Woodworking, bowling, and cardsharks. I make lots of nice things for myself and other people, I work on increasing my bowling scores and techniques, and I make money working at cardsharks.

4. **What do you do for fun?**
   
   - Go out with my girlfriend on the weekends, dance, play my harmonica, spend time with my dog.

5. **Is there anything that you don’t like or that bothers you?**
   
   - Wheeltrans, sirens, banking, annoying roommates, financial issues, bad weather.
## Appendix K: Relaxation Rating Scale Results

<table>
<thead>
<tr>
<th>Session</th>
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<td>2 = 40%</td>
<td>5 = 100%</td>
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<tr>
<td>3</td>
<td>3 = 60%</td>
<td>5 = 100%</td>
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<tr>
<td>4</td>
<td>2 = 40%</td>
<td>5 = 100%</td>
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<td>5</td>
<td>2 = 40%</td>
<td>5 = 100%</td>
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<td>5 = 100%</td>
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<td>7</td>
<td>3 = 60%</td>
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</tr>
<tr>
<td>16</td>
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<td>4 = 80%</td>
</tr>
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</table>
## Appendix L: Content of Relaxation Therapy Program Results

<table>
<thead>
<tr>
<th>Session</th>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
</table>
| 1       | What is the purpose of relaxation therapy? | - To make your heart beat go down.  
- To make me feel calm.  
- To help you focus on the future. |
| 1       | How do relaxation therapy techniques work? | - It works good.  
- It helps me to keep a positive outlook on life. |
| 1       | What are the benefits of relaxation therapy techniques? | - It helps to not let the past take over your life.  
- It helps you focus on the future.  
- Makes me feel better in general.  
- Takes away my depressed mood. |
| 1       | Who can benefit from relaxation therapy? | - It can benefit people who dwell too much on the past.  
- It can help people who are tensed up. |
| 1       | Are there risks involved in relaxation therapy techniques? | - No, not in my eyes. |
| 1       | What types of relaxation techniques exist? | - Deep breathing.  
- Focus on the future.  
- Forget. |
| 1: Homework | Please write down techniques you currently use to relax. | - Think of my girlfriend.  
- Deep breathing.  
- Close eyes.  
- Think how good life is going. |
| 1: Homework | How many ways do you know how to relax? | - Lie down on my bed.  
- Think of my pets.  
- I know at least 2-4 ways. |
| 1: Homework | How often do you take time to relax? | - At least once a day.  
- I usually relax in the afternoon after lunch. |
| 1: Homework | Brainstorm techniques you would be interested in trying that would help you relax. | - A body massage.  
- Focus on good wood working projects. |
| 1: Homework | Let’s choose a word or phrase we will use to help you apply relaxation techniques and relax! | IDEAS:  
- I am a survivor.  
- Relax. |
| 1: Homework | Word/phrase chosen: | SURVIVOR. |
|   | What do you know about deep breathing? | Breathe in slow and out fast.  
|   |  | - Concentrate on lungs.  
|   |  | - It makes you feel calm after awhile.  
| 2: Feedback | Did you enjoy practicing the deep breathing relaxation technique? | Yes, it lets tension leave through breathing.  
| 2: Feedback | How easy or hard was it to focus on the instructions? | It was easy.  
| 2: Feedback | Do you feel like you achieved an overall state of relaxation? | Yes, I feel very relaxed.  
| 2: Homework | What is the word or phrase used that will signify to use or practice a relaxation technique such as deep breathing? | SURVIVOR = deep breathing/use relaxation techniques.  
| 2: Homework | What important things should you do when practicing deep breathing? | Close eyes.  
|   |  | - Sit comfortably  
|   |  | - Think of Aussie.  
|   |  | - In through nose and out through the mouth.  
| 2: Homework | Can you identify situations where you could use deep breathing to help you relax? | In crowds.  
|   |  | - In disagreements with other clients.  
|   |  | - When I hear sirens.  
|   |  | - During banking or woodworking.  
|   |  | - Wheeltrans situations.  
| 3 | What is imagery relaxation? | Look back on relaxing parts of my life.  
| 3 | What would you enjoy imagining to help you feel relaxed? | Lunch break at woodworking.  
|   |  | - Being on the beach.  
| 3: Feedback | Did you enjoy practicing the imagery relaxation technique? | Yes, I did.  
| 3: Feedback | How easy or hard was it to focus on the instructions? | It was straight forward.  
| 3: Feedback | Do you feel like you achieved an overall state of relaxation? | Yes, I did.  
| 3: Homework | What is the word or phrase used that will signify to use or practice a relaxation technique such as deep breathing or imagery relaxation? | Survivor.  
| 3: Homework | What important things should you do when practicing imagery relaxation? | Deep breaths.  
|   |  | - Close eyes.  
|   |  | - Put self in scene.  

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| 3: Homework | Can you identify situations where you could use imagery relaxation to help you relax? | - In shopping malls.  
- In movie theatres.  
- When I hear sirens. |
| 4 | What is muscle relaxation? | - It is when you tense up your body and then release.  
- Deep breathing. |
| 4: Feedback | Did you enjoy practicing the muscle relaxation technique? | - I really enjoyed practicing muscle relaxation. |
| 4: Feedback | How easy or hard was it to focus on the instructions? | - It was easy to follow the instructions but hard to use the left side of my body. |
| 4: Feedback | Do you feel like you achieved an overall state of relaxation? | - Yes, I did quite a bit. |
| 4: Homework | What is the word or phrase used that will signify to use or practice a relaxation technique such as deep breathing, imagery, or muscle relaxation? | - Survivor. |
| 4: Homework | What important things should you do when practicing muscle relaxation? | - Breathe in slow and out fast.  
- Concentrate.  
- Close eyes and focus on something nice. |
| 4: Homework | Can you identify situations where you could use muscle relaxation to help you relax? | - When I hear sirens I should think “survivor”.  
- In grocery stores.  
- During banking and woodworking. |
| 4: Homework | What are some other relaxation techniques you want to try or know of? | - I want to continue practicing muscle relaxation. |
| 5 | What important things do you need to know about deep breathing? | - Breathe in slow and out fast.  
- Close eyes.  
- Imagine. |
| What important things do you need to know about imagery relaxation? | - Close eyes.  
- Sit down in a quite place.  
- Picture places I love to be or places I have been to. |
| What important things do you need to know about muscle relaxation? | - Deep breathing.  
- Tense and relax muscles. |
<p>| What word is used as a signal for you to use relaxation techniques? | - Survivor. |
| Can you identify situations where use of relaxation techniques could be helpful? | - In malls, crowded places, when I hear sirens, when I have nightmares, when I start |</p>
<table>
<thead>
<tr>
<th>What relaxation technique or techniques would you like to practice today?</th>
<th>- Muscle relaxation.</th>
</tr>
</thead>
</table>

my morning, in Wheeltrans situations, when banking, and when I go to woodworking or when I am preparing for woodworking.
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Agitated Behaviour? (Y or N)</th>
<th>“Survivor” prompt delivered? (Y or N)</th>
<th>Relaxed Behaviour? (Y or N)</th>
<th>Verbal praise delivered? (Y or N)</th>
<th>Comments</th>
<th>Staff Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov. 25th</td>
<td>8:00 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated in the morning and is waiting for smokes.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>8:05 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Client said survivor and I repeated survivor back to him.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>8:15 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Pretended to be agitated.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>8:22 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Came into room and he was prompted.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>9:12 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Talking about TTC accidents.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>9:23 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Heard screeching tires.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>9:43 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Wheel Trans was late.</td>
<td>SD</td>
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<tr>
<td>Nov. 25th</td>
<td>9:45 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Wheel Trans said they weren’t taking him.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 25th</td>
<td>9:46 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>In lobby waiting for Wheel Trans.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 26th</td>
<td>8:06 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated about smokes and wants to call mother.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 26th</td>
<td>8:12 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated with morning routine.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 26th</td>
<td>8:15 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Practicing use of prompt in kitchen.</td>
<td>SD</td>
</tr>
<tr>
<td>Nov. 26th</td>
<td>8:17 am</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Agitated with</td>
<td>SD</td>
</tr>
<tr>
<td>Date</td>
<td>Time</td>
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<td></td>
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<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:20 am</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Agitated with roommate and independently implemented relaxation techniques.</td>
<td></td>
</tr>
<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:24 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Preventative prompt where client engaged in relaxed behaviour and discussed the components of relaxed behaviour.</td>
<td></td>
</tr>
<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:26 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Practice.</td>
<td></td>
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<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:27 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Talking about Wheel Trans.</td>
<td></td>
</tr>
<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:38 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated in morning when leaving.</td>
<td></td>
</tr>
<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:41 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated about Wheel Trans.</td>
<td></td>
</tr>
<tr>
<td>Nov. 26&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:42 am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Practice to prevent agitated behaviour.</td>
<td></td>
</tr>
<tr>
<td>Nov. 27&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:10 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Gets up for the day and both bathrooms are being used.</td>
<td></td>
</tr>
<tr>
<td>Nov. 27&lt;sup&gt;th&lt;/sup&gt;</td>
<td>8:17 am</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Roommate is irritating him.</td>
<td></td>
</tr>
<tr>
<td>Nov. 27&lt;sup&gt;th&lt;/sup&gt;</td>
<td>9:23 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Talking about sirens.</td>
<td></td>
</tr>
<tr>
<td>Nov. 27&lt;sup&gt;th&lt;/sup&gt;</td>
<td>10:13 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Hears sirens.</td>
<td></td>
</tr>
<tr>
<td>Nov. 27&lt;sup&gt;th&lt;/sup&gt;</td>
<td>10:14 am</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Sirens still sounding.</td>
<td></td>
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<td>Date</td>
<td>Time</td>
<td>Y Y Y Y</td>
<td>Y Y Y Y</td>
<td>Y Y Y Y</td>
<td>Event Description</td>
<td>SD</td>
<td></td>
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<tr>
<td>Nov. 27th</td>
<td>10:15 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Relaxed when hearing sirens.</td>
<td>SD</td>
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<tr>
<td>Nov. 27th</td>
<td>11:47 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Loud roommate.</td>
<td>SD</td>
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<tr>
<td>Nov. 27th</td>
<td>11:48 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Loud roommate.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Nov. 27th</td>
<td>11:59 am</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Said survivor to himself.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Nov. 28th</td>
<td>8:01 am</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td>Agitated in the morning and prompted himself.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Nov. 28th</td>
<td>8:02 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated in the morning.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>8:18 am</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Didn’t hear prompt.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>8:20 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Agitated in the morning.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>8:40 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Came out in morning appearing agitated.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>11:07 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Acting agitated about wood working at coffee time</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>11:40 am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Busy elevators.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>12:55 pm</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Upset about wood working plans.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>12:58 pm</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>Still upset about wood working and extremely agitated.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>12:59 pm</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Wood working issues.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>1:20 pm</td>
<td>N</td>
<td>N</td>
<td>Y</td>
<td>Practiced relaxed behaviour independently.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>1:22 pm</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Annoyed by roommate.</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Dec. 1st</td>
<td>1:40 pm</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Concerned about banking.</td>
<td>SD</td>
<td></td>
</tr>
</tbody>
</table>
1. Please read the following definitions for relaxed and agitated behaviour. These definitions are also displayed directly on the data recording sheet.

**Relaxed behaviour (Accelerate):** Robert is said to engage in relaxed behaviour when he does any of the following:

a.) Closes his eyes for 5 seconds.

b.) Takes deep breaths for 5 seconds.

c.) Tenses and relaxes muscles.

**Agitated behaviour (Decelerate):** Robert is said to engage in agitated behaviour when he does any of the following:

a.) Paces, purses his lips, or mutters under his breath.

b.) Talks to himself, asks many different questions in quick succession, or shakes his walker.

c.) Grabs the handles of his walker tightly, clenches his fists, or becomes non attentive where you cannot get his attention.

2. In collaboration with Robert, the word “survivor” was chosen to serve as a prompt for him to engage in relaxed behaviour. When Robert hears or says the word “survivor”, it is expected that he will engage in relaxed behaviour. That being said, when staff say the word “survivor”, the “survivor” prompt should elicit the relaxed behaviour as a response.

3. The “survivor” prompt along with the response of relaxed behaviour was developed to help Robert prevent and cope with agitated behaviour. Therefore, when Robert displays agitated behaviour and the “survivor” prompt is given, Robert should engage in relaxed behaviour. The “survivor” prompt is not solely contingent on the occurrence of agitated behaviour. It is encouraged that the “survivor” prompt be delivered randomly, even when agitated behaviour is not displayed. The random delivery of the “survivor” prompt will promote a preventative approach to Robert’s agitated behaviour and also display the control the prompt has.

4. Robert should receive verbal praise for displaying relaxed behaviour, especially when contingent on the “survivor” prompt. If he appears to be remaining calm in a situation that could potentially trigger agitated behaviour, he should receive verbal praise for his coping skills. An example: “Wow Robert! You look relaxed and seem to be remaining calm this morning. Good work!”

5. The purpose of the data recording sheet is to gain information surrounding Robert’s relaxed behaviour, agitated behaviour, the “survivor” prompt, and verbal praise. In doing this, the sheet requires you to identify the date, the time, whether or not Robert displayed agitated behaviour, whether or not the “survivor” prompt was delivered, whether or not Robert displayed relaxed behaviour after receiving the “survivor” prompt, and whether or not he was verbally praised after engaging in relaxed behaviour.

6. Besides the date and time, data is recorded based on a yes or no answer (Y=Yes and N=No). There is also two other columns for comments surrounding the specific recording and for staff initials. Comments are not always necessary. Please see the examples and data sheet on opposite side.

7. Scripts in regard to use of the “survivor” prompt and verbal praise is available.

8. Please let me know if you have any questions or concerns.

**Thank you! Your help and participation is greatly appreciated!**
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Agitated Behaviour? (Y or N)</th>
<th>“Survivor” prompt delivered? (Y or N)</th>
<th>Relaxed Behaviour? (Y or N)</th>
<th>Verbal praise delivered? (Y or N)</th>
<th>Comments</th>
<th>Staff Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nov 5</td>
<td>9am</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Needed Money Right Away</td>
<td>SD</td>
</tr>
<tr>
<td>Nov 5</td>
<td>930am</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Sitting at Table Eating</td>
<td>SD</td>
</tr>
<tr>
<td>Nov 6</td>
<td>935am</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>Missed Wheel Trans</td>
<td>SD</td>
</tr>
</tbody>
</table>
Robert’s Relaxation Program Scripting & Procedures

Scripting

**Scenario:** Robert starts to ask questions quickly in regard to who is taking him banking. He is muttering to himself and shakes his walker.

**Staff:** The staff gets Robert’s attention and say “survivor”.

**Robert:** Robert displays relaxed behaviour.

**Staff:** Staff provides verbal praise for Robert displaying the relaxed behaviour. An example would be saying “Excellent Robert! What a great way to use your relaxation techniques.”

**Scenario:** Robert finds out that his Wheel Trans had to be cancelled and remains calm.

**Staff:** The staff verbally praises Robert for remaining calm and coping with a stressful situation. An example would be saying “Good job in remaining calm and taking time to concentrate on being relaxed.”

Procedures

1. One staff should take 10-15 minutes of time to review Robert’s relaxation binder with him on Mondays, Wednesdays, and Fridays mornings. The staff should ask Robert to spend some time going over relaxation and when Robert is ready go into his room to review his relaxation binder.

2. Robert should be prompted to grab his relaxation binder.

3. Follow guidelines in back of relaxation binder.

4. He should be asked questions in regard to how everything has been going and if he has been using his relaxation techniques. Robert and staff should then go through the binder discussing each of the three relaxation techniques and what situations the relaxation techniques can be applied in.

5. After review of the relaxation techniques, Robert can choose what relaxation technique he would like to practice. Staff can follow the instructions located in the binder that outline the procedures for Robert to follow when practicing.

6. Once Robert has had time to practice his relaxation techniques, he can report on how relaxed he is feeling based on how he felt before and after. These relaxation scales will be located in the binder.

7. Finally, Robert should be praised for all his good work and for his continued use of the relaxation techniques.