Using Problem-Solving Skills, Cognitive Behavioural Therapy, and Anger Management Skills to Increase Aggression Control and Positive Coping in a 14 Year-Old Male

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Dedication

To my parents – thank you for teaching me how to work hard to achieve all of my dreams and instilling in me the need to help others. I could not have done it without you.

To my siblings – for always believing in me and encouraging me to be the best version of myself.

To Kristin – for standing by me, always. I would not have made it through the last four years without you to lean on.
Abstract

Anger can be viewed as both adaptive and maladaptive. Mental health professionals are beginning to notice an increasing trend of adolescent male clients who seek services to treat anger and aggression (Nelson & Finch, 2000). This is a growing concern as anger and aggression cause challenges for the client and society. According to relevant literature, the use of CBT, anger management, and problem-solving training increases anger/aggression control and positive coping. This thesis tested the hypothesis that participation in an individualized counseling program that used CBT, anger management, and problem solving as treatment methodologies would increase positive coping and aggression control. One client with a history of aggression problems participated in the 6-week program. The dependent variables were evaluated by pretest and posttest measures, which included the Emotional Control Questionnaire (ECQ2) and the COPE assessment. Client participation was also measured over the 6-week duration. Statistical analysis suggested that the use of CBT, anger management, and problem-solving increased aggression control and the use of positive coping mechanisms. For future research, a larger sample size with a longer treatment duration would be beneficial. Another recommendation would be to test the effectiveness of CBT problem-solving and anger management separately rather than combined.
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Chapter I: Introduction

Anger is a common protective emotion that can be both positive and negative. Its purpose is to protect us from perceived threats or danger, and motivate us to action. Having no control over feelings of anger, however, can pose problems in everyday functioning. Aggressive outbursts can pose problems at work, school, social clubs, and outings. Anger management issues may also lead to major problems in relationships, the juvenile justice system, and permanent school expulsion. Mental health services’ highest referrals for adolescents are clients who possess violent, aggressive, and acting-out behaviours (Nelson & Finch, 2000). According to Public Safety Canada (2010), males are 30% more likely than females to commit violent crimes. Although youth crime has declined significantly from 2000-2010, youth violent crime has increased 5% over the same period (Public Safety Canada, 2010). Violence and aggression in adolescent males is becoming more recognized because due to its adverse effects at the individual level and at the society level (Nelson & Finch, 2000). Aggression and anger in adolescent males is becoming a topic of interest for many professionals and educators today (Lochman, Powell, Clanton & McElroy, 2006). McLaughlin et al. (2012) interviewed over 6000 adolescents and parents to determine how much of the sample had engaged in aggressive or violent behaviours. McLaughlin et al. reported that over two-thirds of their population admitted to minimal anger control. They also admitted to behaviours that involved property damage, engaging in violence, and even acts of threatening violence (McLaughlin et al., 2012).

Disruptive behaviour disorders, also known as externalizing disorders, are often brought forth to a clinician’s attention because they are known to cause distress to others (Christophersen & Vanscoyoc, 2001). There are three classifications of disruptive behaviour disorders that include oppositional defiant disorder (ODD), conduct disorder (CD), and attention deficit hyperactivity disorder (ADHD). The three classifications make up at least 55% of appointments for many clinicians (Christophersen & Vanscoyoc, 2001). Empirically supported strategies to treat externalizing disorders include problem-solving skills, cognitive-behavioural interventions, and anger management training (Lochman, Whidby, & FitzGerald, 2000). Lochman et al. (2000) explain that problem-solving training is a worthwhile intervention because it allows the clients to learn how to identify problematic situations and it increases their repertoire for responding to problematic situations in a positive and alternative manner. Cognitive behavioural methodologies are empirically supported and have been demonstrated to teach adolescents to react less impulsively in many different situations (Lochman et al., 2000). These authors further state that anger management programs have proven to be successful for aggressive adolescents because the exercises involve teaching clients to recognize their triggers, recognize their degree of anger, and engage in positive coping mechanisms. The focus of this present study is to use CBT techniques, problem solving, and anger management training to treat an adolescent male with anger/emotional control issues. It is hypothesized that anger control and positive coping will be increased through the use of CBT, problem solving and anger management.

Rationale

This study was conducted to add further research to the treatment of anger control in adolescents. It focused on using CBT, problem solving, and anger management to increase emotional/anger control and coping skills in an adolescent male. Emotional control refers to emotional regulation, however, can be explained as individual attempts to express emotions in
positive or appropriate ways (Gellman, 2013). It also refers to a person’s emotional generation and response during different situations (Gellman, 2013). Coping skills can be described as a person’s response to events that are psychologically stressful (Semel Institute, 2015). The purpose of coping skills is to preserve emotional well-being and mental health (Semel Institute, 2015). Finally, coping mechanisms can be positive or negative thoughts, emotions, or behaviours projected in response to life changes or stressful events (Semel Institute, 2015). It is very important to promote anger control and healthy coping mechanisms for adolescents who show symptoms of ODD, CD, and ADHD. As stated above, aggressive behaviour causes many problems and is a frequent treatment target for clinicians.

**Thesis Overview**

This thesis includes several different chapters. The chapters include an introduction, literature review, methodology, results, and discussion. The introduction specifies what the research study and thesis is focused on. It includes some background information on disruptive behaviour disorders and violence and aggression in adolescents. The introduction also includes a rationale of why the research is being conducted. The literature review chapter analyzes various peer-reviewed empirical articles that relate to CBT, anger management, and problem solving. The articles represent the best practice for treating aggression and emotional control problems for adolescents. The methodology chapter describes the procedures of the study, which include information about the participant, research design, materials, measures, and a breakdown of the program. The results chapter is an overview and analysis of the study. The results are communicated in tables and graphs for visual analysis. The discussion chapter consists of the summary, strengths, limitations, challenges, contributions to the field, and suggestions for future research.
Overview

Extensive research has been conducted on the topics of adolescent anger management, aggressive behaviours, and possible treatment options. This literature review summarizes, evaluates, compares, and contrasts prior research on anger and aggressive behaviours in adolescents with an emphasis on effective interventions. This review includes a background of theories on anger and aggression, and risk factors that lead to poor anger control and aggressive behaviours. The review then discusses CBT and its utility with aggressive adolescents. Anger management training and problem solving research is summarized and evaluated. A brief explanation of the importance of positive coping is then followed by a conclusion that links the literature to the current study.

Anger and Aggression

According to Mills (2015), anger is a natural response to threat, rejection, or pain. Although anger is a natural emotion, issues that arise from the maladaptive expression of anger seem to be some of the most serious concerns in the mental health community (Feindler & Engel, 2011). Anger at times can be a “cover-up” emotion in the sense that individuals feel anger instead of feeling emotional or physical pain (Mills, 2015). Blake and Hamrin (2007) explain that anger can be seen as a complex construct as it has behavioural, emotional, and mental components. Aggression is known as the violent behaviour that stems from emotions such as anger (Rodkin, Espelage, & Hanish, 2015). Aggression can be both adaptive and maladaptive because although it can be dangerous, it can also be used to change other’s behaviours and thus can be used to develop group boundaries (Rodkin et al., 2015). Aggression has been found to be significantly problematic for individuals who have difficulty regulating emotions (Herr, Jones, Cohn, & Weber, 2015).

Many risk factors contribute to the development of aggressive behaviours and anger in general. Blake and Hamrin report that some of the broader risk factors include biological factors, home environment, peer relationships, and community violence. Although some studies suggest that both male and female adolescents express similar levels of aggression, others suggest that male adolescents experience higher levels of anger and express more aggression (Goldstein et al., 2013). According to the American Academy of Child and Adolescent Psychiatry (2009), children and adolescents are more susceptible to develop ODD and aggressive behaviours if one or both parents have a history of mood disorders, substance abuse issues, brain-chemical imbalance, or disruptive behaviour disorders such as ADHD or CD. Psychological risk factors include poor child-parent relationships, neglectful parents, immense inter-parental conflict, poor social cue processing, and the inability to form social relationships (American Academy of Child and Adolescent Psychiatry, 2009). Lack of supervision, inconsistent parenting, poverty, dysfunctional home environments, abuse and neglect, and family instability are all considered social risk factors (American Academy of Child and Adolescent Psychiatry, 2009).

As mentioned above, inter-parental conflict can lead to maladaptive emotional reactivity and psychological problems (Davies, Coe, Martin, Sturge-Apple, & Cummings, 2015). Two studies conducted by Davies et al. (2015) examined the relationship between youth involvement in inter-parental conflict and psychological and emotional reactivity issues. Study 1 gathered 263 adolescents and parents and required them to complete child and family functioning assessments. Study 2 gathered 242 preschoolers who participated in observations, structured interviews, and...
surveys to measure family dynamics, history of mental illness, children’s reactivity to inter-parental conflicts, and their adjustment. Results were unanimous across both studies and contributed to the authors’ predictions and previous literature. Davies et al. reported that child involvement in parent conflicts caused poor child emotional reactivity and an increase in internalizing and externalizing psychological problems. Psychological problems were heightened in youth whose parents had a history of mental illness. Degree of adolescent involvement in the parental issues played an important role (Davies et al., 2015). Emotional reactivity to parental conflict was a strong predictor of maladaptive psychological adjustment if the adolescents were highly involved in the inter-parental conflict (Davies et al., 2015). Finally, child involvement in inter-parental conflict could lead to emotional reactivity and adjustment problems that can contribute to emotional dysregulation, high emotional reactivity, and impulsivity (Davies et al., 2015).

In 2011, a study was conducted by Fives, Kong, Fuller, and DiGiuseppe that examined whether anger, hostility, and irrational beliefs predicted physical and verbal aggression. Participants consisted of 135 at-risk youth who were required to self-report and rate peers. Fives et al. reported that irrational beliefs and high anger predicted both physical and indirect aggression, while verbal aggression was predicted by anger alone. Males were viewed as more aggressive by their peers. Hostility was not a reliable predictor of aggression in all types including aggression that was peer-rated. Fives et al. suggest that anger alone is a poor predictor of physical and/or verbal aggression; however, anger paired with irrational beliefs and intolerance for rules was a reliable predictor for aggression.

Some argue that violent media is a strong risk factor for adolescent aggression. Bushman, Gollwitzer, and Cruz (2015) gathered 731 participants consisting of media psychologists, parents, and pediatricians. The participants completed an anonymous survey asking whether violent media contributes to anger and aggression in children and adolescents (Bushman et al., 2015). Results concluded that all groups agreed that violent media such as Internet sites, music videos, TV programs, and video games contribute to violence and aggression in youth. Violent video games and movies had the highest rating while violent literature and comic books had the lowest ratings (Bushman et al., 2015). There was a consensus across the board for all issues except the topic of violent media being a major or minor risk factor for real life violence (Bushman et al., 2015). Although there was some debate, based on their professional opinions, all three groups agreed that violent media is a risk factor to violence and aggression in youth.

Although Davies et al., Fives et al., and Bushman et al. have different hypotheses regarding risk factors, all three studies support the notion that anger, aggression, and emotional control issues can be influenced by biological, social, or psychological factors. Davies et al. explained that aggression could be impacted by social factors such as high parental conflict as well as biological factors such as parental mental illness. Fives et al. concluded that aggression issues might be influenced by poor self-talk and irrational beliefs. Bushman et al. linked violent media to aggressive behaviours in youth. These studies were not without limitations. Davies et al. could not distinguish between internal and external symptoms in a way that was easily interpretable. There were also no direct tests that could be used to distinguish between high and low involvement in relation to internalizing and externalizing issues. Fives et al. explain that since a cross-sectional design was used, it was impossible to determine if anger and irrational beliefs occurred before, after, or at the same time as aggression. Fives et al. also used a peer-rating assessment, which could be seen as substantially biased. Bushman et al. also used a self-
report Likert scale to measure aggression rather than direct observations to assess other potentially harmful effects of violent media. This study was based on opinion and there are potential sources of bias.

**Interventions**

There has been an increase in the development of treatment and prevention programs for aggressive youth. Studies show childhood aggression leads to later problems of violence, deviant behaviour, and poor peer and family relations (Lochman & Curry, 1986). The cognitive-behavioural theory suggests that negative triggers cause aversive arousal that results in cognitive distortions, which lead to anger and aggressive behaviour (Feindler & Engel, 2011). The theory also explains that processes such as cognitive distortions, personal beliefs, expectations, emotional control, and problem-solving skills are crucial in determining an individual’s behaviour when exposed to triggers (Feindler & Engel, 2011). Intense emotions such as anger can significantly influence cognitive distortions and negative automatic thoughts, which could result in impulsive and aggressive behaviour (Feindler & Engel, 2011). Cognitive-behavioural therapy focuses on regulating emotion and modifying cognitive distortions while problem-solving skills training focuses on generating alternative solutions (Feindler & Engel, 2011).

Anger management programs target emotion control deficits and teach conflict resolution skills based on the client’s individual needs (Feindler & Engel, 2011). Before beginning treatment with at-risk youth, it is important to assess clients on an individual basis by using reliable scales and instruments to determine treatment goals (Blake & Hamrin, 2007). Once assessments have been completed, intervention techniques that focus on specific problems should be utilized (Blake & Hamrin, 2007).

**Cognitive Behavioural Therapy**

A study conducted by Down, Willner, Watts, and Griffiths (2011) examined two different anger management groups for 18 adolescents with pre-post-testing. One of the groups used CBT; the other used Personal Development (Down et al., 2011). The CBT group was focused on teaching the clients skills to manage reactive aggression while the Personal Development group was focused on allowing the clients to become motivated to develop less aggressive identities (Down et al., 2011). After the 10-session program, Down et al. found that both groups showed improvements in anger control and self-esteem, however, the CBT group showed better results at follow up and long term.

Kellner, Bry, and Salvador (2008) report that anger management programs that adopt cognitive behavioural interventions are beneficial treatments because they aid at-risk youth in managing anger and aggressive behaviours. Kellner et al. took 45 students and placed half in a 10-week cognitive-behavioural and anger management program while the other half were not in the program. Students in the program showed more prosocial attitudes and behaviours during the program and at follow-up (Kellner et al., 2008). Program students exhibited fewer negative behaviours and aggressive incidents than the non-program students. Students in both groups were required to complete anger logs. Kellner et al. (2008) reported that the students attending the program completed significantly more anger logs than those not attending the program. They also reported that the program students who learned prosocial behaviours in the structured settings were able to generalize them to other settings that were less structured. Kellner et al. concluded that interventions that utilize both CBT and anger management techniques yield the most positive results because enhancing prosocial behaviour contributes to anger control and alternatives to aggressive behaviour.
A meta-analysis conducted by Viljoen, Brodersen, Shaffer, and McMahon (2015) found that CBT is effective in reducing antisocial and aggressive behaviours in adolescents. Viljoen et al. conducted a review of the Risk Needs and Responsivity (RNR) model in relation to the treatments being used with adolescents and youth at risk. The purpose of the model was to determine the risk and needs of the client in order to construct a treatment plan (Vijoen et al., 2015). Clinicians and mental health professionals must strive to use techniques that can be specific and individualized such as CBT and specific skills training (Vijoen et al., 2015). CBT is a successful treatment approach to use with youth at risk because it covers an array of strategies that can be individualized for different clients (Vijoen et al., 2015).

In comparison to other treatment techniques, Down et al. found that using CBT had the most positive long-term results for participants. Kellner et al. found that pairing CBT with anger management was most beneficial. Both research studies used similar interventions to support the authors’ hypotheses. While Down et al. and Kellner et al. both successfully used CBT techniques to increase anger control and prosocial behaviours, there are some limitations to their research. Down et al. only gathered 18 participants, which makes sample size a limitation. The results of both treatment groups were not overwhelmingly diverse. It could be argued that the CBT techniques and personal development techniques could overlap. The research completed by Kellner et al. was only observed in the school setting which is seen as a limitation because there was no observation in the participants’ natural settings. Since there was no observation in natural settings, generalization could not be documented. Direct observation was not carried out at preprogram or at follow-up. The meta-analysis supported both research studies’ hypotheses in concluding that CBT is the most successful intervention when treating youth at risk who have issues controlling anger. CBT is a key component for the current research study as well.

**Anger Management**

Feindler and Engel (2011) explain that the aim of anger management programs is to decrease the intensity, frequency, duration, and severity of anger. The programs then promote alternative responses that can be used in instances of frustration and conflict (Feindler & Engel, 2011). Since aggression in adolescents can be caused by the inability to manage emotional arousal and facilitate positive problem-solving skills, a combination of CBT techniques, anger management programing, and problem solving training accomplish the most positive results for treatment (Feindler & Engel, 2011).

A meta-analysis was conducted by Blake and Hamrin (2007) to determine the current approaches to assessment and treatment of anger and aggression in adolescents. Blake and Hamrin gathered sources that had to meet criteria that consisted of experimental or quasi-experimental, therapy-based interventions, and the clients had to be under the age of 18. Different literature examined attribution retraining programs, relaxation and social skills training, multimodal CBT, programs for school-age children, programs for delinquent youth, and family-based interventions (Blake & Hamrin, 2007). They reported that programs that were cognitive behavioural based were the most widely studied and empirically validated. However, programs that yielded the best results focused on cognitive aspects as well as behavioural aspects such as anger management and control training. (Blake & Hamrin, 2007).

Roberton, Daffern, and Bucks (2015) conducted a study that examined anger management treatment. The study examined the relationship between anger experience and aggressive behaviour. Roberton et al. had 64 participants, half completed anger management
training, and half did not. Participants were required to complete measures of past aggression, emotional intelligence, and anger control. Roberton et al. reported that the participants who had difficulty with emotional control and expression struggled because they did not have training. Those same participants reported vast histories of aggressive behaviour and current behavioural problems (Roberton et al., 2015). Roberton et al. concluded that interventions treating anger should be focused on controlling anger and emotions in a healthy fashion.

Roberton et al. found that teaching clients how to control and manage anger was the best method for treatment. The meta-analysis by Blake and Hamrin concluded that CBT interventions with anger management components were most beneficial for clients. Feindler and Engel explain that the purpose of anger management programs is to aid clients to minimize the frequency, duration, and severity of anger by teaching adaptive ways to cope and manage strong emotions. The present research study is using anger management components for the same reasons. Although some of the above studies suggest pairing anger management with CBT for positive results, they all agree that anger management is a beneficial way to teach clients to manage anger. Roberton et al. used self-reporting assessments, which could leave room for subjectivity and bias. The population was strictly adult offenders and the current study is a case study with an adolescent male. Blake and Hamrin’s meta-analysis fit well the current study because participants were below the age of 18. However, the current research study is a single case while Blake and Hamrin reported group interventions to be very successful.

**Problem Solving**

Lochman and Curry examined 20 aggressive adolescents who were divided into two groups; anger coping intervention or problem solving. Both interventions took place for 18 sessions (Lochman & Curry, 1986). The anger coping intervention group yielded better results for decreasing passive off-task behaviours. However, the problem-solving group demonstrated stronger results for decreasing aggressive behaviours. Results concluded that there were no major differences in both groups; however, when problem-solving training was paired with CBT, the adolescents possessed more on-task behaviour and minimal aggression (Lochman & Curry, 1986).

A meta-analysis was conducted by Glancy and Saini (2005) that reviewed evidence-based treatments for anger and aggression. Although there is an increase in the treatments available to treat clients who have anger and aggression issues, there is limited evidence-based practices to guide clinicians during treatment (Glancy & Saini, 2005). The authors reviewed literature on treatments such as psychoeducational, psychodynamic, substance abuse, cognitive-behavioural, relaxation, social-skills training, multicomponent, and individual and group treatments. They concluded that all of the different types of interventions show positive results, however, cognitive based treatments that incorporate many different aspects pose the best benefits for clients. The multicomponents consisted of cognitive restructuring, relaxation, and problem-solving (Glancy & Saini, 2005). CBT based programs that adopt anger management and problem-solving aspects are also seen as most successful because on average they last about 8 weeks (Glancy & Saini, 2005). The meta-analysis concluded that programs that average beyond 8 weeks have poor success rates because there is potential for high client dropout (Glancy & Saini, 2005).

In the review conducted by Viljoen, Brodersen, Shaffer, and McMahon (2015) that is mentioned above, authors found that success was only achieved if goals for adolescents were set
at the individual level with a focus on social skills and problem-solving. When an adolescent commits a crime, youth justice professionals must decide on which treatments to use; however, treatment plans must focus on individual aspects such as anger management skills and problem solving skills to ensure deviant and aggressive behaviours remain at a minimum (Viljoen et al., 2015).

There was limited literature available that used problem solving alone to treat anger and aggression. Lochman and Curry explained that although problem solving interventions benefited clients, optimum success was accomplished when anger management was used in conjunction with CBT. Lochman and Curry gathered a relatively small sample size and did not include a follow-up. Both are considered limitations. Glancy and Saini supported Lochman and Curry’s research because they reported that cognitive based treatments that adopt behavioural aspects such as problem solving are most successful. Viljoen et al. reported that treatment plans are most successful if they are constructed at an individual level. The current research study is a one-on-one treatment plan with both cognitive and behavioural aspects.

**Coping Mechanisms**

A study was conducted by Ben-Zur (2009) that compared adaptive and maladaptive coping mechanisms. Ben-Zur took participants from three different populations that consisted of general participants, adolescents, and university students and compared their coping styles. Participants were required to complete reliable and validated instruments to determine if problem-focused coping or avoidance coping had positive or negative relations with affect (Ben-Zur, 2009). Emotional support coping such as emotional support and ventilation was also compared with emotional avoidance coping such as denial and behavioural disengagement (Ben-Zur, 2009). Ben-Zur found that problem-focused and emotional support coping yielded best results while avoidance coping had negative correlations with positive affect. Ben-Zur concluded that various coping styles could be considered personality traits; therefore, it is more beneficial to teach avoidant-copers how to use problem-focused coping rather than to change their current avoidant coping ways. Although both types of coping could be used interchangeably in different situations, it is important that clients learn to use problem-focused coping (Ben-Zur, 2009).

In 2011, Csibi and Csibi conducted a study that reviewed the relationship between the development of aggression and coping, self-appreciation, and social supports. The authors recruited 447 adolescents in grades 11 and 12. Two formal assessments were used. Results showed a significant correlation between self-appreciation, means of coping, and expression of aggression (Csibi & Csibi, 2011). Results suggested that male adolescents expressed aggression in an outward or direct manner while aggression for females was expressed in an inward or indirect manner (Csibi & Csibi, 2011). Inward or indirect expression of aggression was associated with avoidant coping while outward expression of anger was associated with planned responding (Csibi & Csibi, 2011). High self-appreciation was correlated with problem-solving and positive coping (Csibi & Csibi, 2011). Csibi and Csibi concluded that poor self-appreciation and social supports lead to maladaptive coping and expression of anger.

Both Ben-Zur and Csibi and Csisi conducted studies regarding adaptive and maladaptive coping. Ben-Zur reported problem-focused and emotional support yielded better results than avoidant coping. Ben-Zur also explained that it is more beneficial for the client if positive coping mechanisms are taught rather than trying to change the existing avoidant coping patterns. The current research study is focused on teaching and encouraging adaptive ways of coping. Csibi
and Csibi explain that high self-appreciation plays a role in positive and prosocial expressions of anger. Both have different hypotheses regarding ways of coping and different predictive factors. Ben-Zur used convenience sampling meaning it restricts generalization. Although Csibi and Csibi had a large sample size and participants were picked at random, they did not implement any treatments. The method consisted of having the participant’s complete three standardized tests then results were compared.

**Conclusion**

After reviewing the literature on various intervention options for treating adolescents who have problems regulating emotions and controlling aggressive behaviour, it is clear that CBT, problem solving and anger management have been effective strategies to increase emotional/anger control while decreasing deviant and aggressive behaviours. The literature review indicates that all three methods of treatment have been successful with adolescents in individual and group settings. As mentioned above, mental health workers are receiving more and more adolescent clients who have problems with anger and aggression. Findings conclude that CBT, anger management, and problem-solving training are effective interventions; however, they work best when they are all implemented together (Down et al., 2011; Kellner et al., 2008; Viljoen et al., 2015; Blake & Hamrin., 2007; Lochman & Curry., 1986; Glancy & Saini, 2005). The analysis of the literature supports the current study in choosing an intervention that combines CBT, anger management, and problem solving to treat an adolescent male who has anger and aggression issues. It is hypothesized that all three treatment aspects will contribute to an increase in emotional control and positive coping. There is a gap in literature in regards to using anger management or problem-solving methodologies alone to treat the same population; therefore, it can be unclear as to what intervention modalities specifically are causing a positive change in thoughts and behaviour. However, all the literature above supports and demonstrates that using CBT programs with anger management and problem-solving aspects to treat at-risk youth is beneficial and successful both after treatment and at follow-up.

*Word count: 3680*
Chapter III: Methodology

Participant and Selection Procedures
The participant was a 14-year-old male adolescent referred by agency staff because of limited anger control, aggressive behaviours, and poor coping skills. He was diagnosed with ADHD. Furthermore, although he was not formally diagnosed with either ODD or CD, he displayed symptoms of both. After a discussion with the residential supervisor, it was clear that the client was well suited for the program. He qualified for the program because he was residing at the agency under a special needs agreement. His placement at the agency occurred because his parents were having difficulty controlling his behaviours at home and in the school setting. The placement student had a discussion with the client and his mother to ensure they were interested in the program. Prior to the program commencing, the client and his parents were given the opportunity to review and sign the consent forms. Since the client was only 14-years-old, consent was obtained from both the client and his mother. The consent forms outlined the benefits and risks of the program and the client’s right to withdraw at any time. It also described the program and explained what was required of the client for participation. Lastly, confidentiality and duty to report were explained and discussed with the client and his mother. The content of the forms was explained aloud and each were given the opportunity to ask questions during the process. The client and his mother signed the consent forms and the documents were left at the agency in the clients file. Client consent is available in Appendix A and parental consent is available in Appendix B. The current research study was approved by the St. Lawrence Research Ethics Board.

Design and Variables
The current study was a single case study using an AB treatment design. Baseline measures were two pre-test assessments. Intervention comprised of six individual sessions of problem solving skill training, CBT, and anger management exercises. Post-test data was also collected and compared to the pre-test data. The independent variable was the individual problem solving, CBT, and anger management sessions. The dependent variables were anger control and coping skills as assessed through the pre-and-post measures.

Operational Definitions
Emotional control refers to emotional regulation, however, can be described as individual attempts to express emotions in positive or appropriate ways (Gellman, 2013). It also refers to a person’s emotional generation and response during different situations (Gellman, 2013).

Coping skills can be described as a person’s response to events that are psychologically stressful (Semel Institute, 2015). The purpose of coping skills is to preserve emotional well-being and mental health (Semel Institute, 2015). Finally, coping mechanisms can be positive or negative thoughts, emotions, or behaviours projected in response to life changes or stressful events (Semel Institute, 2015).

Setting, Apparatus, and Materials
Each session was conducted in a private, designated room at the agency. During the first and last sessions, the researcher provided the client with the two measures and a writing utensil to complete them. The client was also given a workbook to complete the activities and handouts for all six sessions. The workbook was divided into sections which each contained work sheets,
educational handouts, and homework sheets. A second workbook was given to the client on the last session that included the same handouts and worksheets that were administered throughout the program. This occurred to promote generalization and to encourage the client to continue to develop his skills even once he was discharged from the agency.

**Measures**

The Emotion Control Questionnaire (ECQ2) was used to measure the client’s ability to control emotions during different situations and the COPE assessment was used to measure the client’s different coping mechanisms before and after intervention. The ECQ2 is available in Appendix C while the COPE assessment is available in Appendix D.

The ECQ2 was developed by Roger and Najarian (1989). The ECQ2 was administered both before and after the 6-session program. The ECQ2 was chosen because it assesses and measures emotional and aggressive control in various situations. Emotion control was defined as the inclination to restrain the expression of emotional responsiveness (Roger & Najarian, 1989). The ECQ2 is a 56-item self-report measure. Clients are required to respond to the items by choosing either true or false. The questionnaire contains four different sub-factors: rumination, emotional inhibition, aggression control, and benign control (Roger & Najarian, 1989). Clients can achieve a total of 14 points per sub-factor. A high score for rumination indicates deep thought about situations that are emotionally upsetting while a high score for emotional inhibition indicates a low tendency to express emotion (Roger & Najarian, 1989). A high score for aggression control indicates higher amounts of reserve while a high score for benign control indicates a low amount of impulsiveness (Roger & Najarian, 1989). Past research conducted by Roger and Najarian confirmed reliability and validity for the assessment. They reported high internal consistency with alphas of .86, .77, .79, and .81 for the four different factors mentioned above. Concurrent validity yielded modest correlations with other established scales, which included the Eysenck Personality Inventory (EPI), the Buss-Durkee Hostility Inventory, and the State-Trait Anxiety Inventory (STAI).

The COPE assessment was established by Carver, Scheier, and Weintraub (1989). The purpose of this scale was to measure how the client responds to stressful events and what coping mechanisms he uses. The COPE assessment was chosen because it accurately measured both adaptive and maladaptive ways of coping. The assessment was used to measure the client’s coping mechanisms at baseline and then again once the program was completed. It includes 60 items and is a self-report measure. The scale ranges from 1, being “I usually don’t do this at all” to 4, being “I usually do this a lot”. The questionnaire includes 15 different aspects of coping, which include positive reinterpretation, disengagement, venting, social support, active coping, denial, religious coping, humour, disengagement, restraint, emotional support, substance use, acceptance, suppression of activities, and planning (Carver et al., 1989). Each of the 15 subscales include four different items. The lowest a client can score on a particular subscale is 4, while the highest a client can score is 16. A higher client score for a specific coping mechanism indicates a more frequently used method of coping. The COPE assessment presented positive psychometric aspects. Cronbach’s alpha was measured for all 15 scales of the COPE. All alphas were above .59, except mental disengagement, while the average alpha was .79 (Carver et al., 1989).
Procedures

All 6 weeks consisted of one individual session with the client facilitated by the placement student. Sessions lasted about 30 minutes on average. The first session focused on goal setting and the administration of the pre-test assessments. Handouts found in Appendix E were used in this session. The handouts were constructed by the placement student and required the client to outline his long-term and short-term goals while determining what obstacles may arise in the process. This session also included an overview of the program. The second session was focused on problem solving training. The handout found in Appendix F was used to allow the client to brainstorm alternative solutions to various problems and generate a plan of action. The handout was established by the National Drug and Alcohol Research Centre at the University of New South Wales (2012). The third session concentrated on CBT and psychoeducation. Appendix G contains the handout that was used to educate the client on the situation, thought, emotion, and behaviour cycle. The handout was constructed by Therapist Aid (2015). This session also allowed the client to recall past experiences and apply them to the CBT model. The fourth session concentrated on anger management. Appendix H was used as a psychoeducational tool to link the CBT model to anger management. Appendix I was chosen because the handout was a simple way to list different types of anger management skills. Both handouts were constructed by Therapist Aid (2015). The fifth session was focused on the application of skills already taught to the client. This gave the client an opportunity to use the skills and ask any questions. Session five introduced a handout called Anger Diary which was generated by the placement student. The handout required the client to document the triggering event, what thoughts he experienced, his reactions, and the consequences. The last session (sixth) consisted of the wrap-up and termination. Post-tests were also completed during this session. Each session began with an informal activity called ‘how are you feeling today?’ This activity required the placement student to ask the client questions to determine how he was currently feeling and how his week was going to determine what kind of participation was expected for the session. Each session ended with an effort rating. This required the client and the placement student to come to an agreement in determining how much effort was put forth by the client on a scale from 1-10.

Table 1
Sessions Outline

<table>
<thead>
<tr>
<th>Session</th>
<th>Topic</th>
<th>Activities/Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1. Introduction/Welcome</td>
<td>• Welcome</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• How are you feeling today?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Handout for short and long-term goals and obstacles</td>
</tr>
<tr>
<td></td>
<td>2. Goal setting</td>
<td>• Overview of program</td>
</tr>
<tr>
<td></td>
<td>3. Program outline</td>
<td>• Homework</td>
</tr>
<tr>
<td></td>
<td>4. Pre-Test</td>
<td>• Effort Rating</td>
</tr>
<tr>
<td>2</td>
<td>1. Problem solving</td>
<td>• How are you feeling today?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Problem solving worksheets</td>
</tr>
<tr>
<td></td>
<td>2. Thinking alternatively</td>
<td>• Alternative solution thinking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Homework</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Effort Rating</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>
| 3 | 1. CBT | How are you feeling today?  
Psychoeducation  
Practice examples  
Homework  
Effort Rating |
| 4 | 1. Anger Management | How are you feeling today?  
Warning signs, cycle of anger  
Anger thermometer  
Coping statements/Skills  
Effort Rating |
| 5 | 1. Application of skills  
2. Refresher | How are you feeling today?  
Problem solving examples  
CBT examples  
Anger examples/Anger diary  
Effort Rating |
| 6 | 1. Wrap Up/Termination  
2. Post-Test | How are you feeling today?  
Wrap up/Generalization  
Post-test assessments  
Effort Rating |

**Data Analysis**

Visual and descriptive analysis was used to analyze the client’s data. Scores from the pre-assessments were compared to the post assessment scores. Results from the ECQ2 and COPE are presented in both tables and graphs. The tables include central tendency (mean, median, and mode) and measures of variability (standard deviation). The baseline and treatment scores were compared on a bar graph for visual representation. A bar graph was used to present the effort rating from sessions 1-6. A bar graph was used because it is a reliable visual representation from all 6 weeks.
Chapter IV: Results

It was hypothesized that the utilization of CBT, anger management, and problem solving training would contribute to an increase in emotion/anger control and positive coping for the client. The ECQ2 and COPE assessment measured the client’s emotion/anger control and coping both before and after the 6-week program. Client participation was also measured across the 6-week period. The client data is presented, explained, and analyzed below. Data is presented in both graphs and tables, including an explanation for each of the figures and tables.

Outcome Measures

Pre and post treatment scores for the ECQ2 are visually presented in Figure 1, while pre and post treatment scores for the COPE assessment are presented in Figure 2. Figure 3 is a visual representation of client participation over the 6-week period.

The ECQ2.

Client pre and post scores were divided into four sub factors. Figure 1 illustrates a decrease in rumination and emotional inhibition, and an increase in aggression control and benign control. A decrease in rumination indicates a decrease of dwelling on unsettling situations. A decrease in emotional inhibition suggests that the client began expressing emotion more openly. An increase in aggression control suggests that the client has increased his ability to regulate his aggressive impulses. Lastly, an increase in benign control indicates a decrease in impulsiveness.

![Graph of ECQ2 sub factors](image)

*Figure 1.* The above graph is the visual representation of the client’s pre and post scores on the ECQ2.

The COPE Assessment.

Figure 2 illustrates an increase in planning, acceptance, restraint, behavioural disengagement, denial, active coping, venting emotions, and positive reinterpretation. Furthermore, the increase in the client’s score suggests a heightened use of the specific coping
mechanism. However, Figure 2 illustrates a decrease in the subscales suppression of competing activities, the use of emotional support, the use of social support, and mental disengagement. Substance use, humour, and religious coping were subscales where the total score remained the same from pre and post assessments. The client reported no use for the humour, substance use, and religious coping on both pre and post assessments.

![COPE Subscales Graph]

*Figure 2.* The above graph is the visual representation of the client’s pre and post scores for the COPE Assessment.

**Client Participation**

Figure 3 illustrates a steady increasing trend for client participation. The $r^2$ value is 0.84, indicating that the number of sessions can predict a positive participation rating. A value of 0.84 suggests a linear relationship. The client’s participation level increased as the program progressed, which was the desired outcome. Appendix K: Client Participation Over 6 Week Period includes the client participation rating graph with trend lines.
Figure 3. The above graph is the visual representation of client participation over the 6-week period.

Statistical Analysis

Descriptive statistics for the ECQ2 are presented in Table 1 and Table 2, while the descriptive statistics for the COPE assessment are presented in Table 3 and Table 4.

The ECQ2.

The client’s scores were divided into the ECQ2’s four sub factors, which are included below in Table 2. The table also includes the client’s overall score, difference of score, and percentage change. Table 3 includes the mean differences from the pre and post-tests for each of the sub factors. The client’s overall score for the rumination sub factor for the pre assessment was 2 and by the post assessment, it decreased to 1. The client’s mean difference for rumination decreased by 0.07, indicating a decrease in pondering/contemplating over emotionally upsetting events by 7.14%. For emotional inhibition, the client’s total score decreased from 8 to 5 throughout the program. The client’s mean difference decreased by 0.11, indicating a decrease in holding back emotions by 21.43%. The client’s aggression control sub factor score increased from 5 to 10. The client’s aggression control mean difference increased 0.35 from pre to post assessments, which is a 35.85% increase. This indicates an increase in inhibition or restricting aggression. His score for benign control on the pretest was 0 but was increased to 7 by the end of the program. For benign control, the client’s mean difference increased by 0.50, which is a 50% increase. This increase suggests an improvement in thinking before acting and a decrease in impulsiveness. All percentage change calculations for the ECQ2 can be found in Appendix L.
Table 2
*Summary Statistics for Client ECQ2 Scores*

<table>
<thead>
<tr>
<th>Sub Factor</th>
<th>Pre Overall Score</th>
<th>Post Overall Score</th>
<th>Score Difference</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumination</td>
<td>2</td>
<td>1</td>
<td>-1</td>
<td>-7.14%</td>
</tr>
<tr>
<td>Emotional Inhibition</td>
<td>8</td>
<td>5</td>
<td>-3</td>
<td>-21.43%</td>
</tr>
<tr>
<td>Aggression Control</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>35.85%</td>
</tr>
<tr>
<td>Benign Control</td>
<td>0</td>
<td>7</td>
<td>7</td>
<td>50%</td>
</tr>
</tbody>
</table>

Table 3
*Mean Difference (MD) from Pre and Post for ECQ2*

<table>
<thead>
<tr>
<th>Sub Factor</th>
<th>Pre $M$</th>
<th>Post $M$</th>
<th>MD $M$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rumination</td>
<td>0.14</td>
<td>0.07</td>
<td>-0.07</td>
</tr>
<tr>
<td>Emotional Inhibition</td>
<td>0.57</td>
<td>0.46</td>
<td>-0.11</td>
</tr>
<tr>
<td>Aggression Control</td>
<td>0.36</td>
<td>0.71</td>
<td>0.35</td>
</tr>
<tr>
<td>Benign Control</td>
<td>0</td>
<td>0.50</td>
<td>0.50</td>
</tr>
</tbody>
</table>

The COPE Assessment.

The client’s scores were divided into the assessment’s 15 subscales, which are included below in Table 4. The table also includes the client’s overall score, score difference, and percentage change. Table 5 includes the mean differences from the pre to post-tests for each of the subscales. The client’s score for the planning subscale for the pre assessment was 11 and increased to 16 by the post assessment. The client’s mean difference for the planning subscale was a 1.25 increase, which is an increase of 31.25%. An overall increase in this subscale suggests that the client improved his strategic planning when faced with stressful events. The client’s score for suppression of activities decreased from 11 to 8. The client’s mean difference was a 0.75 decrease, making his overall score decrease by 21.43%. A decrease in this subscale suggests that the client began to focus on other tasks instead of only dwelling on the problem at hand. The use of acceptance increased from 6 to 15. The client’s mean difference for acceptance was a 2.75 increase, indicating an increase of 56.25%. An increase in acceptance as a coping mechanism suggests that the client was able to admit the fact that negative situations occur.

Substance use as a coping mechanism did not increase or decrease, instead, it remained at the lowest possible score. Scores remained at 4, which indicates no use of the coping mechanism. The client’s mean difference did not increase or decrease from pre to post. Use of emotional support decreased from 7 to 6. The mean difference for emotional support was a 0.25 decrease, indicating an overall decrease by 6.25%. This suggests that the client decreased his sharing of emotions with staff and peers. The client’s restraint score increased from 8 to 16. The client’s overall mean difference for the restraint subscale was an increase 2, which was a 50% increase. An increase in mean difference for restraint as a coping mechanism suggests that the client was able to increase his ability to refrain from acting too quickly and making situations worse. The use of behavioural disengagement was increased from 7 to 8. Behavioural disengagement’s mean difference, as a subscale was a 0.25 increase, indicating a 6.25% increase. This increase
suggested that the client began to decrease the amount of effort and emotions invested when faced with a problem. Like substance use, humour and religious coping remained at a score of 4. Humour and religious coping did not increase or decrease from pre to post and remained at the minimal total score. The overall score for denial increased from 7 to 11, with a mean difference of 1, indicating an increase of 25%. An increase in denial as a coping mechanism suggests that the client had difficulties believing that certain stressful events occurred. Active coping was increased from 7 to 16. The active coping subscale had a mean difference of 2.25, which was a 56.25% increase. This increase meant that the client took direct action when dealing with a problem or stressful situation. Use of social supports decreased from 14 to 6. The social support subscale mean difference was a 2-point decrease. This subscale was a 50% decrease suggesting that the client asked peers and staff for advice at a minimal level. The client’s score for venting emotions increased from 12 to 14. The venting emotions subscale mean difference was 0.50, which was a 12.50% increase. An increase in venting emotions indicated that the client was aware of his emotions and was comfortable expressing them. Mental disengagement decreased from 10 to 8. For the mental disengagement subscale, the mean difference was a 0.50 decrease. This was a 12.50% decrease, which suggests that the client refrained from engaging in activities just to take his mind off of stressful events. The client’s score for positive reinterpretation was increased from 6 to 12. The positive reinterpretation had a mean difference of 1.50, which was a 62.50% increase. An increase in the positive reinterpretation subscale suggests that the client looks at the difficult situation as a positive learning experience. All percentage change calculations for the COPE can be found in Appendix M.

Table 4

Summary Statistics for Client COPE Scores

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre Overall Score</th>
<th>Post Overall Score</th>
<th>Score Difference</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>11</td>
<td>16</td>
<td>5</td>
<td>31.25%</td>
</tr>
<tr>
<td>Suppression of Activities</td>
<td>11</td>
<td>8</td>
<td>-3</td>
<td>-21.43%</td>
</tr>
<tr>
<td>Acceptance</td>
<td>6</td>
<td>15</td>
<td>9</td>
<td>56.25%</td>
</tr>
<tr>
<td>Substance Use</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>7</td>
<td>6</td>
<td>-1</td>
<td>-6.25%</td>
</tr>
<tr>
<td>Restraint</td>
<td>8</td>
<td>16</td>
<td>8</td>
<td>50%</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>6.25%</td>
</tr>
<tr>
<td>Humour</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Religious Coping</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Denial</td>
<td>7</td>
<td>11</td>
<td>4</td>
<td>25%</td>
</tr>
<tr>
<td>Active Coping</td>
<td>7</td>
<td>16</td>
<td>9</td>
<td>56.25%</td>
</tr>
<tr>
<td>Social Support</td>
<td>14</td>
<td>6</td>
<td>-8</td>
<td>-50%</td>
</tr>
<tr>
<td>Venting Emotions</td>
<td>12</td>
<td>14</td>
<td>2</td>
<td>12.50%</td>
</tr>
<tr>
<td>Mental Disengagement</td>
<td>10</td>
<td>8</td>
<td>-2</td>
<td>-12.50%</td>
</tr>
<tr>
<td>Positive Reinterpretation</td>
<td>6</td>
<td>12</td>
<td>6</td>
<td>62.50%</td>
</tr>
</tbody>
</table>
Table 5
Mean Difference (MD) from Pre and Post for COPE

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pre</th>
<th>Post</th>
<th>MD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning</td>
<td>2.75</td>
<td>4</td>
<td>1.25</td>
</tr>
<tr>
<td>Suppression of Activities</td>
<td>2.75</td>
<td>2</td>
<td>-0.75</td>
</tr>
<tr>
<td>Acceptance</td>
<td>1.50</td>
<td>3.75</td>
<td>2.25</td>
</tr>
<tr>
<td>Substance Use</td>
<td>0</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Emotional Support</td>
<td>1.75</td>
<td>1.50</td>
<td>-0.25</td>
</tr>
<tr>
<td>Restraint</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td>1.75</td>
<td>2</td>
<td>0.25</td>
</tr>
<tr>
<td>Religious Coping</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Denial</td>
<td>1.75</td>
<td>2.75</td>
<td>1</td>
</tr>
<tr>
<td>Active Coping</td>
<td>1.75</td>
<td>4</td>
<td>2.25</td>
</tr>
<tr>
<td>Social Support</td>
<td>3.50</td>
<td>1.50</td>
<td>-2</td>
</tr>
<tr>
<td>Venting Emotions</td>
<td>3</td>
<td>3.50</td>
<td>0.50</td>
</tr>
<tr>
<td>Mental Disengagement</td>
<td>2.50</td>
<td>2</td>
<td>-0.50</td>
</tr>
<tr>
<td>Positive Reinterpretation</td>
<td>1.50</td>
<td>3</td>
<td>1.50</td>
</tr>
</tbody>
</table>

Summary

In conclusion, the utilization of CBT, anger management, and problem solving training increased anger control and positive coping. The ECQ2 indicated that the client’s overall scores for aggression control (35.85%) and benign control (50%) increased, while rumination (7.14%) and emotional inhibition (21.43%) overall scores decreased. The hypothesis was that the 6-week program would aid the client in controlling and expressing his emotions and aggression while decreasing impulsiveness and overanalyzing stressful events. The authors of the COPE assessment, Carver et al., divided the subscales into three main scales. The scales include problem-focused coping (active coping, planning, suppression of competing activities, restraint coping, and use of social support), emotion focused coping (emotional support, positive reinterpretation, acceptance, denial, and religious coping), and other coping mechanisms (substance use, humour, venting emotions, behavioural disengagement, and mental disengagement). For problem focused coping, the client was able to increase overall scores for active coping (56.25%), planning (31.43%), and restraint coping (50%). However, the client’s scores decreased for social support (50%), and suppression of competing activities (21.43%). For emotion focused coping, the client was able to increase his overall scores for positive reinterpretation (62.50%), acceptance (56.25%), and denial (25%). However, the client’s overall score for emotional support decreased (6.25%). For the other coping mechanisms scale, the client increased his scores for venting emotions (12.50%) and behavioural disengagement (6.25%). The client reported no use of religious coping, humour, and substance use.

Client participation increased over the 6-week period. For weeks one and two, the client scored below 7/10. For weeks 3-6, the client was able to achieve a rating of 9/10 or 10/10.
Chapter V: Discussion

Thesis Summary

As stated in the literature review, anger is a common emotion experienced as a means of protection from exterior threats. However, when aggression is used as a means of coping with or responding to anger, there can be numerous negative consequences (Mills, 2015). The maladaptive expression of anger is a growing concern for mental health professionals who work with adolescent males (Feindler & Engel, 2011). The purpose of this thesis was to evaluate the effectiveness of CBT, anger management and problem solving to increase anger control and positive coping. Another focus was to increase client participation. Agency staff referred the client because he had a history of poor anger/aggression control. After some discussion, the client explained that he wanted to address anger and aggression because of the negative consequences of his past behaviours. Intervention consisted of a 6 week individualized counselling program. Different skills were taught to the client each week depending on the focus of the session. The literature review indicates that CBT, anger management, and problem solving skills are essential to the increase of anger control and positive coping. CBT has been effective in increasing emotional control and self-esteem long term (Down et al., 2011). Literature suggests that anger management programs have been effective in decreasing the topography of aggression while teaching skills used to cope with strong emotions (Feindler & Engel, 2011). Problem solving training is known to be a successful treatment for adolescents who struggle with aggression control because it ensures treatment is client focused by working on real individualized problems (Viljoen et al., 2015). This thesis evaluated the effectiveness of the 6-week program with respect to changes on relevant self-report measures. Certain outcomes were expected, including an increase in anger and aggression control and an increase in positive coping skills. To determine the client’s outcomes and the effectiveness of the intervention strategies, pre and post-tests (ECQ2 and COPE) were administered and results were compared and analyzed.

The results from the ECQ2 support the hypothesis that CBT, anger management, and problem solving training increase anger control by equipping the client with the necessary skills to do so. Each sub factor was divided into a three-category scale: low range (0 – 4), moderate range (5 – 9), or high range (10 – 14). The client scored higher on the posttest for aggression control than on the pretest. The client’s score for the pretest fell on the low range of aggression control then increased to the moderate range of aggression control for the posttest. The client’s overall score was one point short of falling in the high range of aggression control. A high score for this sub factor indicates high restraint of hostility or aggression during various natural situations. The client’s score for benign control on the pretest fell on the low range because the score was zero. By the posttest, the client raised his score to fall in the moderate range for benign control. For the benign control sub factor, a higher score suggests less impulsiveness. An increase of aggression control and benign control was desired. The sub factors of rumination and emotional inhibition decreased from pretest to posttest. The client’s overall score for the rumination sub factor decreased by one point from pretest to posttest, but remained in the low range for rumination for both assessments. The client’s overall score for emotional inhibition fell in the moderate range for emotional inhibition and decreased to the low range for emotional
inhibition. Although the overall rumination score for the pretest was minimal, there was a slight decrease in comparison from pretest to posttest. In terms of coping, dwelling on stressful events, and refusing to move past them is not considered positive coping. A decrease in rumination indicates that the client decreased the amount of time he mentally dwells on stressful events. A decrease in emotional inhibition supports the hypothesis as well. Furthermore, this decrease indicates that the client decreased the amount he inhibits emotion and increased the amount he expressed emotions in situations that were emotionally provoking.

The results from the COPE assessment supported the hypothesis that CBT, anger management, and problem solving training increased the client’s ability to engage in positive coping strategies. Overall scores were placed on a scale to determine how much the client used the mechanism. The ranges included: no use of the coping mechanism (1 – 4), low use of the coping mechanism (5 – 8), moderate use of the coping mechanism (9 – 12), and high use of the coping mechanism (13 – 16). The client’s overall score increased for active coping, planning, restraint coping, positive reinterpretation, acceptance, and venting emotions. The client’s overall scores for active coping, restraint coping, and acceptance fell in the low range and increased to the high range. The client’s planning and venting emotions scores fell in the moderate range and was increased to the high range. The client’s score for positive reinterpretation fell in the low range and was increased to the moderate range. From pretest to posttest, the client improved strategic planning and restricting himself from acting before thinking. The results also suggest that the client improved his ability to identify the positives of negative situations and he was able to detect and express his emotions adaptively. Finally, the client improved in learning to accept that some situations were out of his control. The above coping mechanisms are seen as positive, therefore, an increase in each of these subscales supports the hypothesis. The client’s overall score for suppression of activities decreased from moderate range to low range. A decrease for suppression of activities indicated that the client did not focus his attention solely on the problem at hand, rather he engaged in other activities to cope, which supported the hypothesis. Although the client showed positive change on most of the subscales, some of the results from the posttest did not support the hypothesis. The client’s overall scores for emotional and social support decreased. Emotional support decreased from pretest to posttest but remained in the low range, while social support decreased from high range to low range. Since seeking emotional and social support from family, staff, and peers is considered positive coping, the decrease in these subscales did not support the hypothesis. The denial subscale was increased from low range to moderate range, which indicated that the client had increased difficulty believing difficult situations occurred. Although denial was increased, acceptance also increased. When comparing these subscales, the results were inconsistent. The client’s score for behavioural disengagement slightly increased from pretest to posttest but remained in the low range. An increase for behavioural disengagement did not support the hypothesis because this increase suggested that the client decreased the amount of effort utilized to solve the problem at hand. Lastly, the small decrease for the mental disengagement subscale did not support the hypothesis. This subscale decreased from moderate range to low range, indicating that the client decreased in engaging in other activities instead of dwelling solely on the problem situation.
Relevance to the Literature Review

The results of the current study were similar to the results mentioned in the above literature review. Lochman and Curry found that when problem solving training was used simultaneously with CBT, clients engaged in more on-task behaviour and minimal aggression. Kellner et al. suggest that anger management programs that include CBT programming produce positive results that aid at-risk youth in managing anger and aggressive behaviours. Kellner et al. concluded that the participants in the treatment group exhibited fewer maladaptive behaviours and aggressive incidents than the non-treatment group participants. A meta-analysis conducted by Viljoen et al. also concluded that the use of CBT is successful in reducing aggressive and antisocial behaviours. Down et al. suggested that the use of CBT and anger management produces the best improvements for anger control and self-esteem long term and at follow up. Follow up was not completed for the current study; therefore, long term results could not be determined. However, from pre to post treatment the client managed to increase aggressive control and adaptive emotional expression. Similar to Kellner et al. and Viljoen et al.’s results, the current study produced positive results for the ECQ2. The client’s score for aggression increased from low to moderate control and was increased from low to moderate for benign control after participating in the program. Emotional inhibition was decreased from moderate to low, resulting in an increase of emotional expression.

Ben-Zur conducted a study to determine what coping mechanisms are positive. Ben-Zur concluded that problem-focused coping and emotional support coping produced the best results when dealing with difficult situations. Ben-Zur also concluded that it is beneficial to teach avoidant copers how to effectively use problem-focused coping instead of focusing on changing the avoidant coping behaviours. The current study focused on teaching the client how to use positive coping mechanisms when faced with problems. The COPE assessment posttest revealed that the client increased active coping from low to high use, planning from moderate to high use, and restraint coping from low to high use. As mentioned above in the thesis summary, the client also increased his overall score for acceptance and venting emotions. In the current study, the client was able to increase his positive coping skills, yet he did not increase his emotional support coping. The client’s overall scores for emotional support decreased but remained in the low use range, while social support decreased by from high use to low use. The client’s post-test scores for emotional support coping were maladaptive in comparison to the literature.

Strengths

The individualized counselling program was based on empirical literature and best practices for treating adolescent anger problems. CBT, anger management, and problem solving were found to be most effective in treating poor anger and aggression control in adolescent males. All three interventions aspects were used in the current study. The client was residing at the agency; therefore, he had extensive support and structure. If some issue from the individual sessions negatively impacted the client, there were staff available to support him at all times. The placement student was at the agency full time, which allowed the client to form an alliance both in and out of sessions. Since the placement student interacted with the client daily, trust was established. Lastly, client participation increased to almost full engagement. An increase in client
participation indicates higher engagement in the intervention and an improvement in client motivation.

Limitations

The main limitation of this study was the small sample size. The current study was a case study; therefore, it was not a good representation of aggression control for male adolescents as a whole. Although this study yielded positive results, which supported the hypothesis, a larger group would have been more representative. A larger sample size would also allow for statistical analysis and generalization across gender. Another limitation was the short program duration. Better results may have resulted from a program that lasted longer than 6 weeks. Therapeutic alliance was finally developing in weeks 4-6, therefore, more progress may have been made if the program had a longer duration. Follow up was not conducted, therefore, there is no proof that the client continued using his anger control skills and engaging in positive coping after the program came to an end. Another major limitation was that both data collection measurements were self-report. The client could have skewed his responses based on what answer was more socially desirable or rewarding. Since time and motivation was limited, sessions did not include positive coping psychoeducation or skills training. This was a limitation since one of the main goals was to increase positive coping for the client. A stronger focus on the administration of positive coping training could have produced more positive results on the COPE assessment.

Multilevel Challenges to Service Implementation

Many challenges can arise from implementing an individual counselling program with an at-risk youth. Clients may lack attendance, motivation, and participation. It can be especially difficult when clients have a history of mental health, trauma, and addiction. Clients may also be biased when answering the required assessments in a way to produce the most socially valid responses instead of answering honestly. Therapeutic alliance may be difficult to achieve with at-risk youth. These challenges occur at an array of different levels including: client level, program level, organization level, and societal level.

Client Level.

During the program, the client possessed very low motivation during sessions. Out of session, other residents questioned the client’s commitment to the intervention and tried to convince him that he should not participate. The client was influenced greatly by the other residents, therefore, showed no interest in the program. This was frustrating for the placement student. It took about 3 weeks to build rapport with the client and ensure him that the intervention would be worthwhile. After a lot of hard work, the client began to look forward to the sessions and working with the placement student.

Program Level.

The client’s lack of motivation during the beginning of the program resulted in shortening the session durations. Originally, it was decided that sessions should be at least an hour long. After it was determined that the client showed no interest in the sessions, the duration was shortened. The sessions ran accordingly when sessions were shortened to half an hour twice a week. It was difficult to assign homework at the end of each session because the client attended home visits each weekend. While on home visits, the client did not have a lot of supervision;
therefore, homework was never completed. Instead, the client was required to think of difficult situations and events he came across in the past week and during sessions, they would be applied to the problem solving and CBT strategies.

**Agency Level.**

One main challenge was the lack of therapeutic space available for the individual sessions. Although the agency had more than one staff office, there was only one meeting room available for clients. Since there were approximately ten residents residing at the agency, the meeting room was often being used. CAS workers, Addiction Services workers, prime workers, and probation officers all used the single meeting room for appointments with clients. Some weeks, depending on the placement student’s shift, it was difficult to incorporate a session into the client’s day. Since the agency was a youth residence, there was a predetermined schedule in place at all times. The clients often did not have a lot of down time in the evenings.

**Societal Level.**

Having a criminal record from such a young age results in strong stigma. Many doors close when clients have a criminal record before the age of 18. It could be difficult to obtain a part-time job or attend a regular high school. If problem behaviours persist and generalize into society, it can pose a threat for both the individuals and others in the community. It can be very difficult to get youth motivated to change. It is important to be aware of these limitations when implementing treatment. Effective programming must be done as soon as possible to avoid the individual getting in trouble and negatively affecting his future.

**Contributions to the Behavioural Psychology Field**

Although there are vast amounts of research on the topics of CBT, anger management, and problem solving training to treat adolescent males who struggle with anger and aggression control, the current study served to contribute to the existing literature. Similar to the existing research, the current study supports best practice methodologies, which indicate that the utilization of CBT, anger management, and problem solving produce emotional control and adaptive coping for clients. The current study also contributes to the literature that all three intervention approaches produce positive results when they are used simultaneously. Since the placement student was the first behavioural psychology thesis student, other students may be accepted to complete theses within the agency. Since the current study produced positive results, the agency director may be more likely to accept other students to develop individualized counselling programs with the residents. It is likely that other students will be able to provide services to a population that requires it.

**Recommendations for Future Research**

For future research, a larger sample size would be ideal for generalizability. If a larger sample size was used, females could be included to generalize the findings across genders. Furthermore, statistical analysis would be possible which would provide more concrete, valid, and reliable results. A follow up would also be beneficial to include to determine if the skills the client learned were being utilized after treatment was completed. It would be interesting to measure the relationship of client participation to positive results. Positive results would occur from including clients with high motivation and participation. The higher the participation, the
higher the engagement in treatment. It is encouraged that future research include behavioural
data such as the frequency or duration of maladaptive anger expression or maladaptive coping.
The current study only included self-report measures, which are not as reliable as behavioural
data. A final recommendation is designing the treatment based on the client’s needs. If the client
needs more problem solving training than anger management, problem solving should be the
focus. More research is needed for anger management and problem solving alone to treat anger
and emotion control.

Word Count: 11,007
References


Goldstein, N. S., Serico, J. M., Riggs Romaine, C. L., Zelechoski, A. D., Kalbeitzer, R., Kemp, K., & Lane, C. (2013). Development of the juvenile justice anger management treatment...
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Appendix A: Client Consent Form

Project title: Using Problem-Solving Skills, Cognitive Behavioural Therapy and Anger Management Skills to Improve Anger Control in a 14 Year-Old Male

Principal Investigator: Candace Brunet
Name of supervisor: Geris Serran
Name of Institution: St. Lawrence College
Name of institution/agency: Laurencrest Youth Services

Invitation
You are being invited to take part in a project. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at Laurencrest Youth Services. As a part of this placement, I am completing a research project (called an applied thesis). I would like to ask you for your help to complete this project. The information in this form will help you understand my project. Please read it carefully and ask all the questions you have before you decide if you want to take part.

Why is this research study being done?
My project is focused on using basic problem solving and anger management skills to lessen anger and tantrum-like behaviour. It is also focused on increasing emotional and anger control. The program that I have created is aimed to help you cope with anger. I would like to meet with you each week and teach you some skills that will help you control your anger in proper ways. The meetings will be information based and like open talks about different ways that can help you manage your anger. I have also chosen two short questionnaires for you to complete before and after the program to see if it was useful to you. It will also help us to see if the weekly talks have helped you take control of your anger.

What will you need to do if you take part?
If you choose to take part in this study, you will be asked to take part in six short sessions that will take place once a week. The sessions will take place on Wednesday afternoons. Each individual session will last about one hour or less. During the one-on-one sessions, I will give you information about different ways that may come in handy for you when you are struggling with anger during different times. We will go through different situations, both fake and real, and decide on different solutions to those problems. We will also talk about how you are feeling each week and the things that may trigger your anger. Lastly, we will go over different activities that will help you relax. You can share as much or as little as you want to. Each week, I will assign short homework activities or things for you to think about for the next time we meet. If you are feeling overwhelmed about the homework, we can stop assigning it and speak about more during each session. Before we start the program, I will ask you to complete two short questionnaires. When we are done the group, I will ask you to complete the same two questionnaires. These should take about 15-20 minutes each. It may seem like a lot of work but the questionnaires are very short. They are an easy way for us to track if the program is helpful for you.

What are the potential benefits of taking part?
You may or may not directly benefit from being in this project. You may find it helpful to have extra people to talk to about your anger. It may also help you to learn more about yourself and ways to keep you feeling calm and relaxed. By sharing your thoughts in the one-on-one sessions, it may help us see a pattern with could help us in coming up with ways for you to lessen your anger. I believe the skills I will teach you will help you manage your anger.
What are the potential benefits of this research study to others?
The results of this study will help the staff see if programs like this are helpful and positive. It will help me, your prime worker, and staff to see if the program was helpful for you personally in your struggle with uncontrollable emotions. By sharing your thoughts in the sessions, it may help us see a way that we could help us with future clients.

What are the potential disadvantages or risks of taking part?
Risks from taking part in this study are small but may include stress since some of the activities you will take part in during the sessions may be personal. Some of the activities may make you feel sad, guilty, or angry if you are asked to share some of the negative things that have happened because you were angry at times. It is very important for you to let us know if you are not feeling comfortable.

What happens if something goes wrong?
Everybody is different and if you are not feeling comfortable about some of the activities or homework, we can skip it. If you are feeling uncomfortable or very angry, it is important that you tell me or one of the other staff. All of the staff, including myself, are there to help you. We are here to talk if you are not feeling comfortable. I understand that talking about some things may be very hard and you will not be forced to do anything that you are not comfortable doing.

Will my information you collect from me in this project be kept private?
We will be very careful about the forms that you will fill out. You will be given a number so that none of your forms or questionnaires have your name on them. All paper forms will be kept in a locked room that only staff have access to. The information taken from the questionnaires will be kept in a password protected file on a password protected computer. All of the documents will be kept for 7 years. After the 7 years has gone by, all files will be shredded and destroyed in a confidential manner. Your name will not be used on any reports, publications, or presentations from this project.

Do you have to take part?
Taking part is your choice. It is up to you to decide whether or not to take part in this project. If you do decide to take part, you will be asked to sign this form. If you do decide to take part in this project, you are still free to stop at any time, without giving any reason, and without any penalty or punishments. If you decide to stop, please speak to myself or my supervisor. If you do decide to participate, you can withdraw at any time, without giving any reason. If you wish to withdraw, your data will be safely destroyed.

Contact for further information
This project has been reviewed by the Research Ethics Board at St. Lawrence College. The project will be developed under the supervision of Geris Serran, my supervisor from St. Lawrence College. I appreciate your cooperation and if you have any additional questions or concerns, feel free to ask me, Candace Brunet (Cbrunet04@sl.on.ca). You can also contact my College Supervisor Geris Serran (Gserran@sl.on.ca) or you may also contact the St. Lawrence College Research Ethics Board at reb@sl.on.ca.

Consent
If you agree to take part in this research project, please complete the following form and return it to me as soon as possible. A copy of this signed document will be given to you for your own records. An additional copy of your consent will be retained at the agency [and in a secure location at St. Lawrence College, if applicable].
By signing this form, I agree that:

✓ The project has been explained to me.
✓ All my questions were answered.
✓ Any harm and stress and possible benefits (if any) of this study have been explained to me.
✓ I understand that I have the right not to take part and the right to stop at any time.
✓ I am free now, and in the future, to ask any questions I have about the project.
✓ I have been told that my personal information will be kept confidential.
✓ I understand that no information that would identify me will be released or printed without asking me first.
✓ I understand that I will receive a signed copy of this consent form.
✓ If the researcher or any of the staff members believes I may be harmful to myself or others, they are allowed to report it to someone, to withdraw me from the program, or to speak with me about it.

I hereby consent to take part.

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<tr>
<th>Participant Name</th>
<th>Signature of Participant</th>
<th>Date</th>
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<tr>
<th>Student Printed Name</th>
<th>Signature of Student</th>
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Appendix B: Parental Consent Form

**Project title:** Using Problem-Solving Skills, Cognitive Behavioural Therapy and Anger Management Skills to Improve Anger Control in a 14 Year-Old Male

**Principal Investigator (Student):** Candace Brunet  
**Supervisor:** Geris Serran  
**Institution:** St. Lawrence College

**Invitation**
Your child is being invited to take part in a research study. I am a student in my 4th year of the Behavioural Psychology program at St. Lawrence College. I am currently on placement at Laurencrest Youth Services. As a part of this placement, I am completing a research project (called an applied thesis). I would like to ask you for your child’s help to complete this project. The information in this form will help you understand my project. Please read the information carefully and ask all the questions you might have before you decide if you want your child take part.

**Why is this study being done?**
This project uses educational-based activities and teaching problem solving and anger management skills to help decrease anger and strong emotions. The activities will involve coming up with different solutions to scenarios, recording emotions and noticing patterns of emotions and behaviour, and teaching relaxation exercises. We believe this program will be helpful by helping children manage their emotions. Your child’s opinions and thoughts are important in this project.

**What will your child need to do if s/he takes part?**
If you choose to allow your child to take part in this study he will be asked to meet with me (one-on-one) for one hour or less each week. We will talk about anger, managing it, and ways to apply coping skills. He will be asked to complete two short questionnaires (about 20 minutes) before we begin the program. We will then meet once a week (for about 45 minutes) on Wednesday afternoons for 6 weeks. During this time, your child will engage in different activities and information sessions. At the end of the 6 weeks, your child will complete the same two short questionnaires (about 20 minutes) to help see if the sessions were helpful to him.

**What are the potential benefits to your child if they take part?**
Potential benefits of taking part in this research study may include your child learning more about himself and ways to manage his anger. Your child may improve with how he manages his emotions. It may be helpful for your child to have someone else who is supportive to talk to about his emotions.

**What are the potential benefits of this research study to others?**
The results of this study will help to see if programs like this are helpful and positive. It will help staff to see if the program was helpful for your child personally in their struggle with unmanageable emotions. By sharing his thoughts in the sessions, it may help us see a way that we could help us with future clients.

**What are the potential disadvantages or risks to my child if they take part?**
Risks from taking part in this research study are minimal but may include feeling sad, angry or upset about having to speak about difficult topics. Some of the activities may make your child feel sad, guilty, or anger if he is asked to share some of the negative things that have happened because of his anger.

**What happens if something goes wrong?**
Every individual is different. If your child has a strong reaction towards any of the activities, your child may speak further with myself, his prime worker, or other staff. All of the staff, including myself, are
there to help. We are here to talk if your child is not feeling comfortable. I understand that talking about
some things may be very hard and your child will not be forced to do anything that they are not
comfortable doing.

**Will the information you collect from my child in this project be kept private?**
We will make every attempt to keep any information that identifies your child confidential unless
required by law. No names or identifiers will be used. Your child will be assigned a number to use on the
questionnaires. The consent forms, my project notes and completed questionnaires will be kept in a
locked room that only staff have access to. The computer files with the study data will be kept in a
password protected file on a secure, password protected computer. All study documents and results will
be kept securely for 7 years, and then they will be destroyed in a confidential manner. Your child’s name
or other identifiers will not be used any reports, publications, or presentations resulting from this project.

**Does my child have to take part?**
Taking part is voluntary. It is up to you to decide whether or not allow your child to take part. I will also
ask your child if they want to take part. If you decide to allow your child take part, you will be asked to
sign this consent form. If you do decide to allow your child to take part in this project, you and/or your
child are still free to stop at any time, without giving any reason, and without experiencing any penalty, or
negative effects.

**Contact for further information**
This project has been reviewed by the Research Ethics Board at St. Lawrence College. Geris Serran, my
supervisor from St. Lawrence College, helped me develop this project. I appreciate your help and the help
from your child. If you have any additional questions, feel free to ask me, Candace Brunet
(Cbrunet04@sl.on.ca). You can also contact my College Supervisor Geris Serran (Gserran@sl.on.ca) or
you may also contact the St. Lawrence College Research Ethics Board at reb@sl.on.ca.

**Consent**
If you agree to allow your child to take part in this research project, please complete the following form
and return it to me as soon as possible. A copy of this signed document will be given to you for your own
records. We will keep an additional copy of your consent at the Laurencrest.

By signing this form, I agree that:

- The study has been explained to me.
- All my questions were answered.
- Possible harm and discomforts and possible benefits to my child of this study have been explained to me.
- I understand that my child has the right not to participate and the right to stop at any time.
- I am free now, and in the future, to ask any questions I have about the study.
- I have been told that my child’s personal information will be kept confidential.
- I understand that no information that would identify my child will be released or printed without asking me first.
- I understand that I will receive a signed copy of this consent form.

I hereby consent for my child, ________________ to take part.
Appendix C: Emotion Control Questionnaire (ECQ2)

The ECQ2 is a 56-item scale that was constructed to measure emotional control. The first scale that was devised to measure emotion control, called the Emotion Control Questionnaire (ECQ), was developed by Roger and Nesshoever (1987). The original authors defined ‘emotion control’ as the tendency to inhibit the expression of emotional responses (1989).

There are 4 factors that comprise the ECQ2:
- **Rehearsal** – measures the degree of rumination over emotionally upsetting events
- **Emotional Inhibition** – assesses the tendency to inhibit experienced emotion
- **Aggression Control** – examines the inhibition of hostility
- **Benign Control** – correlates with ‘impulsiveness’ and was included to distinguish it from aggression control.

**Scoring:** Participants rate statements as either true or false on each of the 56 items. The 4 factors of the ECQ2 comprise 14 items each.

**ECQ 2**

Instructions: Please indicate how you feel about each item by circling either ‘True’ or ‘False’. If you feel that an item is neither entirely true nor false, please choose the alternative that is most like you. If you haven't been in the situation described, please say how you feel you would behave in that situation.

(1) When someone upsets me, I try to hide my feelings.  
    True False

(2) If someone pushed me, I would push back.  
    True False

(3) I remember things that upset me or make me angry for a long time afterwards. True False

(4) I seldom feel irritable.  
    True False

(5) I often take chances crossing the road.  
    True False

(6) People find it difficult to tell whether I'm excited about something or not. True False

(7) I often do or say things I later regret.  
    True False

(8) I find it difficult to comfort people who have been upset. True False

(9) I generally don't bear a grudge-when something is over, it's over, and I don't think about it again. True False

(10) No-one gets one over on me---I don't take things lying down. True False
(11) When something upsets me I prefer to talk to someone about it than to bottle it up.  
(12) I've been involved in many fights or arguments.  
(13) I get 'worked up' just thinking about things that have upset me in the past.  
(14) I'm not easily distracted.  
(15) If I'm badly served in a shop or restaurant I don't usually make a fuss.  
(16) If I receive bad news in front of others I usually try to hide how I feel.  
(17) I frequently change my mind about things.  
(18) If a passing car splashes me, I shout at the driver.  
(19) If someone were to hit me, I would hit back.  
(20) I seldom show how I feel about things.  
(21) I often say things without thinking whether I might upset others.  
(22) I often find myself thinking over and over about things that have made me angry.  
(23) If I'm pleasantly surprised, I show immediately how pleased I am.  
(24) I tend to snap at people.  
(25) If I get angry or upset I usually say how I feel.  
(26) If someone says something stupid, I tell them so.  
(27) If I see someone pushing into a queue ahead of me I usually just ignore it.  
(28) I can usually settle things quickly and be friendly again after an argument.  
(29) My interests tend to change quickly.  
(30) I don't feel embarrassed about expressing my feelings.  
(31) If I see or hear about an accident, I find myself thinking about something similar happening to me or to people close to me.  
(32) I think about ways of getting back at people who have made me angry long after the event has happened.  
(33) I'd rather concede an issue than get into an argument.  
(34) I never forget people making me angry or upset, even about small things.  
(35) I seldom 'put my foot in it'.  
(36) I lose my temper quickly.
(37) I think people show their feelings too easily. True False
(38) I find it hard to get thoughts about things that have upset me out of my mind. True False
(39) Almost everything I do is carefully thought out. True False
(40) I don't think I could ever 'turn the other cheek'. True False
(41) I often daydream about situations where I'm getting my own back at people. True False
(42) I find long journeys boring—all I want is to get there as quickly as possible. True False
(43) Expressing my feelings makes me feel very vulnerable and anxious. True False
(44) If a friend borrows something and returns it dirty or damaged, I usually just keep quiet about it. True False
(45) I can't stand having to wait for anything. True False
(46) If I see something that frightens or upsets me, the image of it stays in my mind for a long time afterwards. True False
(47) I hate being stuck behind a slow driver. True False
(48) If someone insults me I try to remain as calm as possible. True False
(49) Thinking about upsetting things just seems to keep them going, so I try to put them out of my mind. True False
(50) I usually manage to remain outwardly calm, even though I am churned up inside. True False
(51) If I lose out on something, I get over it quickly. True False
(52) I can't help showing how I feel even when it isn't appropriate to do so. True False
(53) If I have to confront someone, I try not to think too much about it beforehand. True False
(54) I like planning ahead rather than just seeing how things turn out. True False
(55) I sometimes just come out with things that embarrass people I'm with. True False
(56) Sometimes I just can't control my feelings. True False
Appendix D: COPE Assessment

**Problem-focused coping** (active coping, planning, suppression of competing activities, restraint coping, seeking of instrumental social support);

**Emotion-focused coping** (seeking of emotional social support, positive reinterpretation, acceptance, denial, turning to religion);

**Coping responses that are less useful** (focus on and venting of emotions, behavioral disengagement, mental disengagement).

**COPE**

Please circle the response that most reflects how you deal with stressful events, using the scale below to make your choice.

1 $\rightarrow$ I usually don’t do this at all, 2 $\rightarrow$ I usually do this a little bit, 3 $\rightarrow$ I usually do this a medium amount, 4 $\rightarrow$ I usually do this a lot

1. I try to grow as a person as a result of the experience.
2. I turn to work or other substitute activities to take my mind off things.
3. I get upset and let my emotions out.
4. I try to get advice from someone about what to do.
5. I concentrate my efforts on doing something about it.
6. I say to myself "this isn't real."
7. I put my trust in God.
8. I laugh about the situation.
9. I admit to myself that I can't deal with it, and quit trying.
10. I restrain myself from doing anything too quickly.
11. I discuss my feelings with someone.
12. I use alcohol or drugs to make myself feel better.
13. I get used to the idea that it happened.
14. I talk to someone to find out more about the situation.
15. I keep myself from getting distracted by other thoughts or activities.
16. I daydream about things other than this.
17. I get upset, and am really aware of it.
18. I seek God's help.
19. I make a plan of action.
20. I make jokes about it.
21. I accept that this has happened and that it can’t be changed.
22. I hold off doing anything about it until the situation permits.
23. I try to get emotional support from friends or relatives.
24. I just give up trying to reach my goal.
25. I take additional action to try to get rid of the problem.
26. I try to lose myself for a while by drinking alcohol or taking drugs.
27. I refuse to believe that it has happened.
28. I let my feelings out.
29. I try to see it in a different light, to make it seem more positive.
30. I talk to someone who could do something concrete about the problem.
31. I sleep more than usual.
32. I try to come up with a strategy about what to do.
33. I focus on dealing with this problem, and if necessary let other things slide a little.
34. I get sympathy and understanding from someone.
35. I drink alcohol or take drugs, in order to think about it less.
36. I kid around about it.
37. I give up the attempt to get what I want.
38. I look for something good in what is happening.
39. I think about how I might best handle the problem.
40. I pretend that it hasn't really happened.
41. I make sure not to make matters worse by acting too soon.
42. I try hard to prevent other things from interfering with my efforts at dealing with this.
43. I go to movies or watch TV, to think about it less.
44. I accept the reality of the fact that it happened.
45. I ask people who have had similar experiences what they did.
46. I feel a lot of emotional distress and I find myself expressing those feelings a lot.
47. I take direct action to get around the problem.
48. I try to find comfort in my religion.
49. I force myself to wait for the right time to do something.
50. I make fun of the situation.
51. I reduce the amount of effort I'm putting into solving the problem.
52. I talk to someone about how I feel.
53. I use alcohol or drugs to help me get through it.
54. I learn to live with it.
55. I put aside other activities in order to concentrate on this.
56. I think hard about what steps to take.
57. I act as though it hasn't even happened.
58. I do what has to be done, one step at a time.
59. I learn something from the experience.
60. I pray more than usual.
Appendix E: Goals and Obstacles

GOAL PLANNING

Setting Goals – short and long term

Something I want to accomplish this week:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Something I want to accomplish this month:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

Something I want to accomplish throughout this program:

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
_________________________________________________________________
Obstacles and Moving Forward
Think about some things that may get in the way of reaching your goals.

List 5 obstacles you may come across:
1. ________________________________________________________________
2. ________________________________________________________________
3. ________________________________________________________________
4. ________________________________________________________________
5. ________________________________________________________________

Brainstorm solutions to these obstacles:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
### Appendix F: Problem Solving

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>What is the problem or worry?</td>
</tr>
<tr>
<td>2</td>
<td>Brainstorm potential solutions</td>
</tr>
<tr>
<td>3</td>
<td>Disadvantages of this solution</td>
</tr>
<tr>
<td>4</td>
<td>Advantages of this solution</td>
</tr>
<tr>
<td>5</td>
<td>Pick the best solution (or the least-worst)</td>
</tr>
<tr>
<td>6</td>
<td>What steps do you need to take to put this solution into action?</td>
</tr>
</tbody>
</table>
Appendix G: CBT Psychoeducation

The Cognitive Model

Situation → Thought → Emotion → Behavior

something happens → the situation is interpreted → a feeling occurs as a result of the thought → an action in response to the emotion
Appendix H: Cycle of Anger

**TRIGGERING EVENT**
A triggering event can be just about anything that results in negative thoughts.

Examples include:
- Getting cut off while driving.
- Having a bad day at work.
- Your friend is late meeting you.

**NEGATIVE THOUGHTS**
Negative self-talk occurs in response to a trigger.

Examples include:
- "That jerk just had to go and cut me off because they're so important."
- "I hate my job. I'm horrible at it. Every day is the worst."

**BEHAVIORAL RESPONSE**
Based upon your thoughts, emotions, and physical symptoms, you respond to the situation. Aggression and other behavioral responses to anger often result in new triggering events.

Examples include:
- Fighting
- Yelling
- Arguing
- Criticizing

**EMOTIONAL RESPONSE**
The emotional response depends on thoughts. Negative thoughts result in a negative emotional response.

Examples include:
- After thinking that another driver has intentionally cut you off, resulting emotions may be anger and frustration.

**PHYSICAL SYMPTOMS**
Your body reacts to your emotions, usually outside of your awareness.

Examples include:
- Shaking
- Tensing of muscles
- Heavy Breathing
- Clenched fists
- Flushed skin
## Appendix I: Anger Management Skills

### Anger Management Skills

<table>
<thead>
<tr>
<th>Technique</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recognize your anger early</td>
<td>If you’re yelling, it’s probably too late. Learn the warning signs that you’re getting angry so you can change the situation quickly. Some common signs are feeling hot, raising voices, balling of fists, shaking, and arguing.</td>
</tr>
<tr>
<td>Take a timeout</td>
<td>Temporarily leave the situation that is making you angry. If other people are involved, explain to them that you need a few minutes alone to calm down. Problems usually aren't solved when one or more people are angry.</td>
</tr>
<tr>
<td>Deep breathing</td>
<td>Take a minute to just breathe. Count your breaths—four seconds inhaling, four seconds holding your breath, and four seconds exhaling. Really keep track of time, or you might cheat yourself! The counting helps take your mind off the situation as well.</td>
</tr>
<tr>
<td>Exercise</td>
<td>Exercise serves as an emotional release. Chemicals released in your brain during the course of exercise create a sense of relaxation and happiness.</td>
</tr>
<tr>
<td>Express your anger</td>
<td>Once you’ve calmed down, express your frustration. Try to be assertive, but not confrontational. Expressing your anger will help avoid the same problems in the future.</td>
</tr>
<tr>
<td>Think of the consequences</td>
<td>What will be the outcome of your next anger-fueled action? Will arguing convince the other person that you’re right? Will you be happier after the fight?</td>
</tr>
<tr>
<td>Visualization</td>
<td>Imagine a relaxing experience. Think of every sense. What do you see, smell, hear, feel, and taste? Maybe you’re on a beach with sand between your toes and waves crashing in the distance. Spend a few minutes imagining every detail of your relaxing scene.</td>
</tr>
</tbody>
</table>
## Appendix J: Anger Diary

<table>
<thead>
<tr>
<th>BEFORE I WAS ANGRY</th>
<th>WHAT MADE ME ANGRY?</th>
<th>THOUGHTS &amp; BODILY SENSATIONS</th>
<th>BEHAVIOUR WHILE ANGRY</th>
<th>RESULT OF BEHAVIOUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>What was I feeling?</td>
<td>Who? What? Why? When?</td>
<td>What ran through my mind? Did my body change (e.g. sweating, pacing, shaky)?</td>
<td></td>
<td>Positives? Negatives?</td>
</tr>
<tr>
<td>My mood?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
Appendix K:
Client Participation Over 6-Week Period

Figure 3. The above graph is the visual representation, with trend lines, of client participation over the 6-week period.
Appendix L:

Percentage Change - ECQ2

**Rumination**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>= 2/14</td>
<td>= 1/14</td>
</tr>
<tr>
<td></td>
<td>= 0.1428 X 100</td>
<td>= 0.0714 X 100</td>
</tr>
<tr>
<td></td>
<td>= 14.28%</td>
<td>= 7.14%</td>
</tr>
</tbody>
</table>

= 7.14 – 14.28
= -7.14%

**Emotional Inhibition**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>= 8/14</td>
<td>= 5/14</td>
</tr>
<tr>
<td></td>
<td>= 0.5714 X 100</td>
<td>= 0.3571 X 100</td>
</tr>
<tr>
<td></td>
<td>= 57.14%</td>
<td>= 35.71%</td>
</tr>
</tbody>
</table>

= 35.71 – 57.14
= -21.43%

**Aggression Control**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>= 5/14</td>
<td>= 10/14</td>
</tr>
<tr>
<td></td>
<td>= 0.3557 X 100</td>
<td>= 0.7142 X 100</td>
</tr>
<tr>
<td></td>
<td>= 35.57%</td>
<td>= 71.42%</td>
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</table>

= 71.42 – 35.57
= 35.85%

**Benign Control**

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>= 0/14</td>
<td>= 7/14</td>
</tr>
<tr>
<td></td>
<td>= 0 X 100</td>
<td>= 0.50 X 100</td>
</tr>
<tr>
<td></td>
<td>= 0</td>
<td>= 50%</td>
</tr>
</tbody>
</table>

= 50%
Appendix M:

Percentage Change - COPE Assessment

Planning
Pre Post
= 11/16 = 16/16
= 0.6875 X 100 = 1 X 100
= 68.75% = 100%

= 100 – 68.75
= 31.25

Suppression of Activities
Pre Post
= 11/16 = 8/16
= 0.7857 X 100 = 0.5714 X 100
= 78.57% = 57.14%

= 57.14 – 78.57
= -21.43

Acceptance
Pre Post
= 6/16 = 15/16
= 0.3750 X 100 = 0.9375 X 100
= 37.50% = 93.75%

= 93.75 – 37.50
= 56.25

Substance Use
Pre Post
= 4/16 = 4/16
= 0.25 X 100 = 0.25 X 100
= 25% = 25%

= 25 – 25
= 0%

Emotional Support
Pre Post
= 7/16 = 6/16
= 0.4375 X 100 = 0.375 X 100
= 43.75% = 37.50%
### INCREASING AGGRESSION CONTROL

= 37.50 – 43.75  
= -6.25

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restraint</strong></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>8/16</td>
<td>16/16</td>
</tr>
<tr>
<td></td>
<td>0.50 X 100</td>
<td>1 X 100</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Behavioural Disengagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7/16</td>
<td>8/16</td>
</tr>
<tr>
<td></td>
<td>0.4375 X 100</td>
<td>0.50 X 100</td>
</tr>
<tr>
<td></td>
<td>43.75%</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>62.5%</td>
</tr>
<tr>
<td>Humor</td>
<td></td>
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<tr>
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<td>4/16</td>
<td>4/16</td>
</tr>
<tr>
<td></td>
<td>0.25 X 100</td>
<td>0.25 X 100</td>
</tr>
<tr>
<td></td>
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<td>25%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Religious Coping</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4/16</td>
<td>4/16</td>
</tr>
<tr>
<td></td>
<td>0.25 X 100</td>
<td>0.25 X 100</td>
</tr>
<tr>
<td></td>
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<td>25%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>25%</td>
</tr>
<tr>
<td>Denial</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7/16</td>
<td>11/16</td>
</tr>
<tr>
<td></td>
<td>0.4375 X 100</td>
<td>0.6875 X 100</td>
</tr>
<tr>
<td></td>
<td>43.75%</td>
<td>68.75%</td>
</tr>
<tr>
<td></td>
<td>68.75% – 43.75</td>
<td>25%</td>
</tr>
<tr>
<td></td>
<td>25%</td>
<td>25%</td>
</tr>
</tbody>
</table>
Active Coping
Pre  Post
= 7/16  = 16/16
= 0.4375 X 100 = 1 X 100
= 43.75%  = 100%

= 100 – 43.75
= 56.25%

Social Support
Pre  Post
= 14/16  = 6/16
= 0.875 X 100 = 0.375 X 100
= 87.50%  = 37.50%

= 37.50 – 87.50
= -50%

Venting Emotions
Pre  Post
= 12/16  = 14/16
= 0.75 X 100 = 0.875 X 100
= 75%  = 87.50%

= 87.50 – 75
= 12.50%

Mental Disengagement
Pre  Post
= 10/16  = 8/16
= 0.625 X 100 = 0.50 X 100
= 62.50%  = 50%

= 50 – 62.50
= -12.50

Positive Reinterpretation
Pre  Post
= 6/16  = 16/16
= 0.375 X 100 = 1 X 100
= 37.50%  = 100%

= 100 – 37.50
= 62.50%