Using Cognitive-Behavioral Therapy to Help Manage Symptoms of Anxiety and Depression for an Adolescent with Gender Dysphoria

by

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Dedication

To my Family and Friends.

I could not have made it this far without your love and support, my success in life is because you all.
Abstract

There is a high prevalence for anxiety and depression symptoms in youth with Gender Dysphoria, who often do not receive the necessary treatment to manage these symptoms. Cognitive Behavioral Therapy (CBT) has been proven to be able to treat mental health issues including anxiety and depression in a variety of cases. In this research study, CBT treatment for a client with GD was evaluated. During the study a single client aged 14 with comorbid symptoms of severe anxiety and depression undergoes eight CBT treatment sessions. The effectiveness of the treatment was evaluated using Becks Anxiety Inventory (BAI) and Becks Depression Inventory 2nd edition (BDI-II) during pre and post-treatment. The results indicated that CBT was successful in treating anxiety symptoms and unsuccessful in treating the depression symptoms. Limitations included a small sample size, limited measurements and lack of follow up.
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To the class of 2017 who without them I would not have had such a great experience with this program.
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Introduction

There have been an increase in reports of children experiencing mental illness such as anxiety and depression, which has become even more prevalent in adolescent population (Benjamin, Harrison, Settipani, Brodman, & Kendall, 2013). The day to day stressors in high school, when paired with mental illness, can leave adolescents in need of some additional support to manage their symptoms. This was the case with a grade 9 student experiencing both anxiety and depression and symptoms of Gender dysphoria (GD). GD is a psychological disorder in which a person feels that they are the gender opposite to their birth sex (Megeri & Khoosal 2007). Megeri 2007 states the mental disorders of anxiety and depression are often comorbid with the GD diagnosis. The vulnerability of the student transitioning into high school and from female to male meant that support would be essential in order for him to be successful at school and for his overall mental health. Due to the limited research around students with GD this research project may be able to help not just one transgender student cope with mental illness, but other students with the same diagnosis have success with coping with their symptoms.

Currently the only treatment for GD is hormone medications and physical surgery. These methods, however effective, are difficult to achieve due to the age and consent required for such treatment. Therefore, in order to support adolescent who is not eligible to receive treatment for GD directly, the focus must then be on treating the anxiety and depression associated with disorder. A common and successful treatment for anxiety and depression is Cognitive Behavioral Therapy (CBT) (Forman E, Herbert, Moitra, 2007 as cited in Beck 1997). According to Wright Basco & Thase (2006) CBT uses techniques such as case formulation, psychoeducation, working with automatic thoughts, and other behavioral methods to change a person’s maladaptive thinking. Wright et al. (2006) go on to say that by challenging a person’s maladaptive thinking to create more rational ones should suppress the negative feelings associated with the thoughts and thus reducing their symptoms of anxiety and depression. This research study will focus on teaching coping techniques to participant over the course of eight CBT sessions while using Becks Anxiety Inventory (BAI) (Beck and Steer 1993) and Becks Depression Inventory (BDI) (Beck, Steer, & Brown 1996) to determine the success of the treatment. The study looks to determine whether CBT is an effective treatment for an adolescent’s anxiety and depression that is related to their GD symptoms.

Thesis Overview

The literature review will examine the efficacy is using CBT to treat anxiety and depression on a variety of age groups and disorders, with comparing and contrasting or CBT against other methods of treatment. The method section will go over the details of the participant, consent procedures for both the student and guardians, the, materials provided along with the inventories involved with the study. The method section will also go over the programs design and implementation procedures such as the specifics of each CBT session and how they were conducted. The results section will go over the goals of the research project and the definitions of the target behaviors involved. The results will also examine whether the treatment was effective or not by comparing pre and posttest results, by how much, and answer any question about the data. Finally the discussion section will analyze and summarize the data’s’ findings with an overall conclusion about the research, based on the findings and any additional relevant input.
Literature Review

Persons with GD have a strong desire to be accepted and live as the opposite sex by making their body look as congruent with their preferred sex as possible (Megri & Khoosal, 2007). The International Classification of Disorders as cited in Megeri & Khoosal (2007) defines GD is a diagnosis of a person having anxiety, confusion, or discomfort with their birth gender for over two years. Megeri and Khoosal (2007) assert that there is not a great deal of knowledge about the cause of GD other than its association with the brain’s atypical neurodevelopment which causes the brain to develop in a way opposite to its birth sex. Hormones and genetic and environmental factors were also suggestions as to the cause of the disorder. Gomez-Gil, et al., (2012) state that treatment for GD is hormonal and surgical to synergize in making the individuals feel and look as the gender he or she wish to associate as. The transition between the two genders can often be a difficult process for the individual and family members which may take a toll on the individual’s mental health.

The transgender population is much more vulnerable to anxiety and depression than the general population (Budge, Adelson, & Howard, 2013). Additionally, Budge et al., (2013) suggest that those who have been diagnosed with GD often require psychological support. Medication is a method of treatment that is often used to directly treat the symptoms of anxiety and depression. The issues with medication are not only the potential risks and side effects given to the patients but also the lack of support it provides the individual. Anti-depressants and anti-anxiety medications do not help teach the user how naturally manage their symptoms psychological through therapeutic coping techniques, which are far more beneficial to the client (Hides, Carroll, & Catania et al., 2010). Cognitive Behavioral Therapy (CBT) is one therapeutic method that helps an individual identify thought patterns and events that trigger symptoms while showing the client how to reduce these symptoms using various techniques. While there have been limited direct studies linking the effect of CBT on GD, there have been many studies that show the effectiveness of CBT in treating persons with anxiety and depression (Forman, Herbert, Moitra, Yeomans, & Geller, 2007). Symptoms of anxiety and depression have been proven to be detrimental to an individual’s mental health and day to day performance. The prevalence of anxiety and depression is already high in all populations including adolescents; however, with the population experiencing GD, it is experienced twice as much (Budge et al., 2013). Budge et al., (2013) also suggest GD can cause a lot of social issues for adolescents transitioning to their preferred sex which can take a toll on their mental health. In order for an adolescent to be successful in school, it is important to reduce the number of barriers that might hinder that person’s performance, whether that be with social or mental health concerns. The studies below will look at the effectiveness of CBT in managing symptoms of anxiety and depression.

Having common fears as a child is considered just an aspect of growing up; however, one of the biggest psychological struggles reported by today’s youth is with their anxiety (Barrett, Dadds, & Rapee, 1996). Barrett et al., (1996) have suggested that these childhood anxieties have been linked to increased anxiety levels in adulthood, major impacts on their functioning, and social adjustment. Barret et al. (1996) decided to use CBT as the method of treating seventy-nine children aged 7 to 14 years old with various anxiety disorders. The 12 sessions of CBT that lasted 60 minutes and involved working through a work book. The workbook involved different aspects of CBT such as cognitive restructuring, recognizing anxious conditions, self-talk, exposure to feared stimuli, and relaxation training. The goals of the first four sessions were to develop coping skills so that in the following 8 eight sessions they could apply them to various
situations causing them anxiety. After the CBT sessions were conducted, there was an added component of Family Anxiety Management (FAM) where they would discuss the session with their parents and a therapist. Using both self-reported and direct measures, the study discovered that there was a significant reduction in the children’s anxiety (Barret et al., 1996). Furthermore, these reductions in anxiety overall remained consistent over a 6-month and 12-month follow up period. The initial results were 64% of the children in the study no longer met the diagnostic criteria for anxiety, which increased to 70% during the 6-month follow up in the CBT intervention alone. Future studies looking at more specific anxiety disorders were recommended using both methods of treatment with long-term follow-ups in order to determine CBT effectiveness on these populations.

Moscovitch, Gavric and Senn, (2011) examined the effectiveness of treating social anxiety disorder (SAD) using emotional regulation during CBT. SAD impedes individuals’ from participating in daily social activities or interactions. The study involved 25 patients with SAD using self-report for pre and posttest measures. The treatment used 12 weekly 2 hour sessions of CBT with components of psycho-education, cognitive restructuring and social skills training in a small group setting. The participants were put into two groups. One group of 15 participants included the responders while the other group of 10 were the non-responders. Responders consented to the addition of emotional regulation in addition to their CBT while the 10 non-responders did not. Both groups experienced significant improvements for their SAD symptoms. However, the respondents experienced a greater improvement than the non-respondent group. The limitation included the small sample size and only focused on one anxiety disorder meaning additional research needs to be done on the effectiveness of CBT on larger groups and other anxiety disorders. Similar to Barrett et al’s., (1996) findings that CBT is successful in treating general anxiety disorders over a long period of time, Moscovitch et al. (2013) demonstrate CBT’s immediate effectiveness towards more specific anxiety disorders. Despite the clear effectiveness of CBT, additional comparisons to other treatments are necessary in order to determine if this method is the most effective one to use on the participant.

A common yet effective method in treating anxiety disorders, like generalized anxiety disorder (GAD), is anxiety management (Butler, Fennell, Robson, & Gelder, 1991). According to Butler et al., (1991), anxiety management has both cognitive and behavioural components and thus is often used in CBT therapy to treat anxiety symptoms. As a result, CBT is believed to be a more flexible form of therapy over behavioural treatments alone due to CBT’s ability to treat additional elements of GAD. These elements often include social anxiety, loss of confidence, and depression that are a result of everyday stressful situations. Butler et al., (1991) did a study that looked at the effectiveness of both behavioural therapy (BT) and CBT separate in treating 57 patients with GAD. The treatment sessions for BT focused on controlling symptoms of anxiety through relaxation, gradual exposure, and confidence building. CBT was focused on similar aspects of the BT but also included looking at identifying automatic anxious thoughts, cognitive restructuring and changing schemas. Results of the study showed that CBT was more effective in treating GAD symptoms than BT alone. It can also be noted that patients who received CBT were found to be more resilient to early relapse and showed greater scores during the 6-month follow up over just patients who just received BT alone. This study also supports a similar claim as the previous articles, which is the superiority of CBT in treating various anxiety disorders and specific ones for different sexes and age groups.
Benjamin, Harrison, Settipani, Brodman and Kendall, (2013) suggest that untreated anxiety symptoms worsen over time and can have long term impact on youth due to the greater potential to develop into depression or substance abuse disorders (SUDs). There have been several studies that support the utility and effectiveness of CBT, but not many that target the anxiety symptoms before the depressive disorders have the chance to develop (Benjamin et al., 2013). The study by Benjamin et al., (2013) examine the outcomes of children treated for anxiety for both successful and unsuccessful populations. This study is being done to determine whether children who were treated for anxiety at a younger age experience less adult anxiety, depression or substance abuse in young adulthood compared to those who were not treated. Benjamin et al., (2013) used Beck’s Anxiety Inventory BAI (Beck & Steer, 1993) and Beck’s Depression Inventory BDI-II (Beck, Steer, & Brown, 1996) among other scales and inventories to determine the results. The results showed that the participants who responded well to the CBT treatment during childhood had fewer or diminished cases of anxiety, depression and SUDs during follow up. Additionally, those who were not treated for their symptoms experienced higher rates of substance abuse specifically around alcohol with panic disorders and social anxiety, which further demonstrates how successful early treatment with CBT can significantly lower the risk of future disorders. The limitation to the study is that those who did not have success with the CBT treatment struggled with similar disorders during follow up as the control group. CBT’s effectiveness in treating anxiety symptoms is clear, but must also be effective in treating depression in order to help the particular client for the study.

Hides, Caroll and Catania, (2009) examined the effectiveness of CBT in treating young people with depression and issues around substance abuse. The study was performed on sixty young people between the ages of 15 to 25 who had been diagnosed with major depressive disorder (MDD) with concurrent substance use or substance disorders. The patients received ten CBT treatment sessions, once a week, for one hour in addition to case management, which lasted a total of 20 weeks. There were a several cases of attrition in this study where patients dropped out or failed to be contacted after missing meetings while eight refused to be included in the study. At the end of the 20 weeks, the remaining 43 cases were found to have either full or partial remission of their MDD diagnosis. CBT also had significant reductions on the Hamilton depression scales of the patients demonstrating the treatments effectiveness in treating depression. Hides et al, (2009) also state that CBT caused significant improvements with the patient’s depression, anxiety, and social functioning on top of reducing the likely hood of the patient having a substance use disorder. The limitations with this study were the small sample size that may also be attributed to the high dropout rate and the lack of a comparison group or a randomization procedure lower the study efficacy. However, the studies high rates of external validity and overall positive findings suggest although further research needs to be done, CBT can be used to treat depression and substance abuse effectively (Hides et al., 2009).

Although Hides et al., (2009) and (Benjamin et al., 2013) found the positive impact of CBT in ordinary populations experiencing depression and anxiety with elements on SUDs. Murray and Cooper (2003) studied the effect of CBT on symptoms of post-partum depression. These authors researched the impact of either CBT, non-directive supportive counseling, or a brief psychodynamic therapy on 193 women experiencing post-partum depression (PPD). The effects of three methods of treatment were examined during 4.5 month, 18months, and 5 years post-partum. Each therapy session focused on the mother-infant relationship in their present environment, while supporting the mothers with beneficial CBT techniques. These experiences
included difficulties in the relationship, problem solving approach and competence in the mother’s caretaking ability. The effects of the treatments varied, but CBT was found to have short-term benefits for the mothers dealing with relationship issues between them and their infant. The limitations with this study is believed to be that it should have been implemented sooner seeing as 4.5 months might have been a little late missing out on potential benefits that may have occurred sooner. The Murray and Cooper (2003) study is an example of where CBT can be successful but not as effective in all situations. Each individual and circumstances they have experienced are different which is why effective CBT sessions target an individual’s specific needs in order to have the greatest success.

Medication is often used as a general method of treatment, however it is not nearly as effective without an additional method of therapy that targets patient’s specific symptoms. Wiles, Thomas, and Abel., (2013) examined the effectiveness of medication for depression in combination with CBT. This large-scale study looked at 469 patients between the ages of 18 and 75 with treatment who had all been diagnosed with depression and were on anti-depressants. If the client had a score below 14 on the BDI and fit the international classification for diseases criteria for depression, they would be deemed eligible for the study. Half of the patients were assigned care with just the medication while the other half were assigned the medication with a CBT component. It was discovered that only a third of the patients who just received the antidepressants responded fully to the treatment. The patients who received both medication and treatment had significant reductions in their depressive symptoms and improving quality of life (Wiles et al, 2013). The study is able to reinforce the narrative that medication is not as effective if not paired with additional methods of therapy related towards the client’s needs. Seeing as depression and anxiety are comorbid symptoms of GD it is also just as important to look at the effects of CBT on both anxiety and depressive symptoms together.

Mental illness often comes with physical symptoms, but if untreated can also take a toll on the individual’s ability to work in both school or job related settings. Jansson, Gunnarson, Bjorklund, Brudin, Perseuis, (2013) study examined the effectiveness of CBT when compared to problem-based self-care (PBM) groups for common mental health disorders. This study specifically targeted the working population 16-67 who had missed a significant number of working days directly as a result of mental illness. The PBM therapy focused mainly on exchanging experiences in a group setting where interactions could yield new methods of coping and handling various struggles in life to create a new sense of self-worth for themselves. The CBT component lasted for 12, single hour sessions of CBT focused around treating anxiety, depression, stress, and work ability. Both CBT and PBM groups displayed significantly lower anxiety and depression symptoms. However, CBT participants showed a greater increased level of work ability and problem solving and reduced stress levels. Jansson et al., (2013) noted these improvements be a result of the problem solving aspect included in the CBT that was more tailored to the client’s individual work habits. This study does demonstrate the effectiveness of other treatments methods for anxiety and depression. Despite CBT’s prevalence over PBM in this study there are a number of other treatment methods that need to be compared to determine if CBT is the best method of treatment for anxiety and depression.

A study by Richards et al., (2016) compared the cost and outcomes between CBT and behavioral activation (BA) in treating depression and anxiety. This study examined 440 participants who met the DSM-IV criteria for depression over the age of 18. The treatment used 50% of them treated with CBT and 50% treated with BA. The study used up to 20 single hour
sessions with both core and secondary techniques based on the type of therapy the client received. There were at least eight sessions of therapy conducted for the majority of participants. The number of sessions often varied based on the experience of the therapist, seeing as there was a range of both recently trained and veteran therapists used in the study. Both treatments were found to be effective at treating the participants’ depressive symptoms without any conclusion that CBT was significantly better than BA. This means that CBT was not necessarily more effective than BA at effectively treating mental health symptoms in this study, however it is still an effective treatment method overall.

Forman et al., (2007) conducted a study using Cognitive Therapy (CT) to treat anxiety and depression in one hundred and one heterogeneous outpatients. CT involves a number of similar aspects of CBT such as, cognitive restructuring, identifying maladaptive thoughts, and psychoeducation (Forman et al., 2007). Forman et al., (2007) compared CT to acceptance and commitment therapy (ACT) in treating participants with anxiety and mood disorders. ACT is used to increase acceptance of distressing thoughts, emotions, and sensations for subjective experiences (Forman et al., 2007). The study was community based with a diverse population of participants. Forman et al, (2007) found a significant amount of evidence to support the effectiveness of CT in improving the participants ‘depression and anxiety symptoms in addition to their quality of life. These positive outcomes demonstrate a potential for CT and ACT to reduce symptoms of anxiety and depression with other participants using similar methods. By working through adolescents` negative views of the varying encounters, the aim of this treatment is to improve the individual’s quality of life. The effectiveness of ACT and CT demonstrates again how other methods of therapy can also be used to treat anxiety and depression. In contrast, CBT still appears to be the dominant choice for therapy in the majority of the studies even being referred to as the gold standard in both Jansson et al., (2013) and Austin and Craig, (2015).

The transgender population is a difficult population to find research for due to the stigma and misunderstanding that comes with this group of people. Therefore, finding studies that directly relate CBT to GD is often uncommon of how people with GD are not necessarily transgender. Persons may experience GD with thoughts and feelings that their body is the opposite sex from how their brain feels they should be, but have no desire to change their birth sex. The distinct needs of the individuals in the transgender community often vary which is why professionals who understand the experiences of this population are essential for successful treatment (Austin & Craig, 2015). Austin & Craig, (2015) are developing an approach that is a unique study looking at trans-affirmative practices that incorporates acceptance of all experiences across the variance of the transgender community. The trans-affirmative CBT (TA-CBT) approach allows participants to explore, understand and create new experiences in a safe setting (Austin & Craig, 2015). The main issues with previous studies of (TA-CBT) is the lack of research or understanding of the professionals involved. Therefore, this study used professionals familiar with issues of the transgender community who would began the study by focusing on breaking down the distances or distrust the participants might have based on previous experiences. Elements of psycho-education, challenging thoughts, encouraging social connectedness among other CBT methods would be used in order to treat feelings specific to TA agenda.

According to the majority of studies examined, CBT has been recognized as one of the most common and widely used methods of treatment for treating both anxiety and depression in
various participants and settings. The efficacy is largely due to the fact that when it comes to addressing serious mental health concerns CBT is recognized as the gold standard (Austin & Craig, 2015). Despite other methods of treatments such as ACT, BA , PBM , and medication which were found to have their own success, they did not appear to be as strong as CBT. Medication is often a popular approach of treatment for symptoms of anxiety and depression although as demonstrated in Wiles et al, 2013 a therapeutic component is necessary. Furthermore, Benjamin et al. (2013) study indicates that an early CBT intervention in adolescents before their symptoms worsen is often successful in preventing future disorders during adulthood. CBT is a method that not only can fit in with the student’s day-to-day life in high school but also allows for the flexibility and support of additional services if necessary. The short weekly sessions, using simple scales, such as BDI and BAI, are common throughout the research, which makes the adjustment to therapy easier on the student. Furthermore, the social support recommend to treat persons with GD in Budge et al. (2013) will also be provided in a client-centered format that will prove most effective for the single client involved.

Method

The participant for the study is a single 14-year old adolescent male in the 9th grade at a high school. The adolescent was born as a female and began experiencing feelings of GD at an early age before he finally expressed these feelings to his parents in the seventh grade. During the clients transition from female to male he has been experiencing symptoms of anxiety and depression, which he has struggled to cope with. The client sought out counseling services at the school, so the adolescent care worker assigned the researcher to design a client centered program under her supervision to the client’s current mental health concerns. The selection procedures are being an adolescent with GD and experiencing symptoms of anxiety and depression, because this study is created solely based on one client’s situation. Lastly, consent from the guardian is required before treatment may begin because the client is a minor. The client’s parents have had difficulty being able to accept the changes their child has been expressing about his GD. Despite the lack of home support for the student the parents agreed to sign the consent form that was sent home following the approval of this research project from the ethics board. In addition, an assent form was also given to the participant to ensure he also understands and consents to the project.

Facilitators

The two facilitators for this research project are the adolescent care worker (ACW) and the researcher who will be performing the CBT under the supervision ACW. Each facilitator will conduct a file review, and have an informal discussion with the student in order to gain a sufficient understanding of the client’s history, current situation, and symptoms. Additional informal discussions leading up to therapy will be essential in building rapport in order to gain a strong sense of what his needs will be moving forward with the CBT treatment. It is also recommend that both facilitators follow the practices of “Learning Cognitive Behavior Therapy an Illustrated Guide” written by Wright, Basco, & Thase, (2006) when performing CBT. The CBT sessions will follow related Chapters in the guide book in order sure competent understanding of the techniques involved with the procedure.

Measures

*Becks Depression Inventory- II*
The BDI-II (Beck, Steer, & Brown 1996) (Appendix B) is a major revision from the original version created by Aaron Beck and used universally for over 35 years. The newer inventory contains all necessary elements of the previous version, however now contains more modern items based on additional research acquired since the original was created. The BDI core aspects are still present in the BDI-II such as using 21 items, focused on depressive symptom, measured on 4-point Likert scale (0-3). The scores range from not present, somewhat present, very present, to severe. The total scores add up to 1-10 being normal, 11-16 being mild mood disturbances, 17-20 being borderline depression levels, 21-30 being moderate depression, 31-40 being severe depression, over 40 being extreme depression. The BDI-II also reflects the more modern definition of depression in the DSM IV, while covering additional criteria and emotions not covered in the original inventory. Lastly, the high rates of validity and reliability appear to be further improved upon in this newest version.

Beck’s Anxiety Inventory (1993 Edition)

The BAI (Beck and Steer 1993) (Appendix C) created by Aaron Beck and his associates is a well-known and well-designed assessment tool used to determine an individual’s anxiety score. The anxiety score is created using 21 items that focus on anxiety symptoms, measured on 4-point Likert scale (0-3). The scores range from; not at all, mildly, moderately, and severely. The scores are then added up and the client is put into 3 categories 0-21 indicating very low anxiety, 22-35 indicating moderate anxiety and anything above 36 would be considered potential cause for concern. The brief inventory is easy to understand and is backed up with high rates of reliability and validity based on three in depth studies to support the data.

Setting and Apparatus

The therapy session will be held for 45 minutes with the researcher once a week during the last half of his first period on Tuesdays unless otherwise scheduled. The client will be taking part in 8 sessions of a CBT program at the high school in a private office setting. The office setting will be quiet with two comfortable chairs to help ensure the client confidentiality kept in a safe environment. The materials used will be a pencil, additional paper for notes, and depending on the session an activity worksheet such as case formulation, thought change records, and activity scheduling worksheets. In addition, the The BDI-II (Beck, Steer, & Brown 1996), BAI (Beck and Steer 1993) and therapy reflection questions will be needed in the final session.

Operational Definitions

**Anxiety (decelerate):** Anxiety involves persistent fear caused by maladaptive thinking about non-threatening environmental stimuli. The worrying or fear leads to negative thoughts or emotions that result in negative behavior or symptoms. These symptoms often include nervousness, inability to relax, flushed face, lightheaded feeling, hands trembling according to (Beck and Steer 1993). These are 6 of 21 symptoms that will be measured using the BAI (Beck and Steer 1993) in order to determine the client’s level of anxiety before and after treatment.

**Depression (decelerate):** Depression is a frequent feeling of unhappy or satisfied mood over a designated length of time causing an individual to become significant less engaged in activities. Symptoms of depression often include self-dislike, crying, loss of pleasure, pessimism, loss of energy as outlined in the BDI (Beck, Steer, & Brown 1996). There are 21 total items in the inventory that will measure the client’s level of depression before and after treatment.
Cognitive Behavioral Therapy: CBT uses varying techniques to change a person’s thought patterns from a maladaptive way of thinking to a more adaptive way of thinking. CBT includes elements of assessment and formulation, psycho-education, working with automatic thoughts, behavioral methods, and reflective techniques. These aspects of therapy involve teaching client how to identify the causes of the anxiety and depression while using the coping strategies previously listed to alleviate some of the symptoms.

Research Design

Eight sessions of CBT will be the method of treatment for the client’s anxiety and depression. The focus of therapy session each week be tools used for the text “Learning Cognitive Behavior Therapy and illustrated guide” written by Wright, Basco, & Thase, 2006. The models used in the therapy sessions can be found in the Wright et al., (2006) text such as the case formulation, thought change records, and activity scheduling worksheets. Each of these activities will be documented. Prior to the CBT sessions the BAI (Beck and Steer 1993) and BDI-II (Beck, Steer, & Brown 1996) will be delivered in order to determine the baseline of the client’s anxiety and depression. Using the anxiety and depression inventories, this study will have of a pre and posttest research design similar to the design of Forman et al. (2007). Following the 8 weeks of treatment the same inventories will be given as a posttest to measure the effectiveness of the treatment. The researcher will take the data from both the pre and posttest measures and compare them as a whole and using individual sections of the inventories to analyze the study’s results. The researcher will run the sessions alone, only after discussing the specifics of what each session will cover with my agency supervisor will the session take place. Upon completion of each session there will be a 10 minute debrief between myself and the agency supervisor about the session’s outcome and the upcoming progress. Generally there will be a brief discussion about what the session will focus on before proceeding. This will often entail a greeting, symptom check, the upcoming CBT exercise or assessment and a review of key points, tips, coping strategies and feedback about previous sessions. The researcher will take into account any information learned during the structuring of the sessions before proceeding. The program is subject to minor changes based on the client’s response to therapy and the need to focus on certain aspects of the client needs

The first Session will be a centered around the initial assessment and future goal setting for the CBT. The assessment and formulation will be completed using a Case formulation worksheet. This worksheet will cover the client’s Diagnosis/Symptoms, Formative Influences, Situational Issues, Biological, Genetic, Medical Factors, Strengths/Assets, and Treatment Goals. This session will involve an informal discussion about the client’s background along with any additional information that might be vital for future therapy sessions. Building additional rapport with the client during this session is important for the progression of the therapeutic relationship. There will be a brief overview of automatic thoughts and schemas at the end of the session to help the client understand what will be taught in the sessions to come.

The second session will consist of in depth structuring and education with the inclusion of psycho-education. After a greeting and brief discussion as stated above the focus will shift to the results of the initial BAI (Beck and Steer 1993) and BDI-II (Beck, Steer, & Brown 1996) to help the client and researcher understand the current symptoms before moving forward. The researcher will next help the client understand their emotions, behaviors and events that’s were
previously mentioned in the case formulation worksheet (Appendix D). An overview of case formulation will be discussed in detail while the researcher will begin to teach the client about biological aspects anxiety and depression a maladaptive thinking. The creation of overall goals the client wishes to achieve will also be developed with the assistance to the researcher.

Sessions 3 and 4 will consist of working with automatic thoughts and schemas on both anxiety and depression. These sessions will be focused around the use of a thought change record (Appendix E) (Appendix F) that looks at the situation, the automatic thoughts, emotions, rational response and outcome. Elements of these sessions will also consist of socratic questioning, use of thought change records, generating rational alternatives, identifying cognitive errors, examining the evidence, de-catastrophizing, and reattribution. The previously mentioned elements of CBT will be taught as skills and coping techniques to help the client manage their depressive and anxiety symptoms. The use of these skills and techniques will carry over in each following session to ensure they are understood and utilized when necessary.

Sessions 5 and 6 will be a review of the previous sessions, with the addition of improving self-motivation and problem solving that have been linked to the clients symptoms. There will be discussion about symptom management, emotional overload, cognitive distortions, social factors and avoidance. There will be an activity scheduling worksheet (Appendix G) to will help the client plan out their day to put their week into perspective in order to gain a better understanding of where they are most stressed and when they are least to help manage those events.

Session 7 will focus on reducing anxiety and relaxation training. These sessions will include assessments of symptoms, triggers and coping strategies. There will also be a breathing exercise and image exposure. These techniques will be used synonymously to help the client manage their anxiety symptoms. The target of this session will be used to practice previously learned techniques, while incorporating new ones in order to assist the client in trying to use various coping strategies in order to find the most effective one for the situation.

Session 8 will be a reflection and maintenance session. This session will cover all aspects of the previous sessions as well as a questionnaire about how the client felt about the overall success of Therapy. The coping techniques, information, and worksheets will be reviewed in hopes that the client can ask any further questions on what was covered so that they can use any of the techniques learned on their own outside of therapy. There will also be a discussion about what goals were completed and which ones were not. This session will allow the client to express any feelings they had about therapeutic their experience while discussing what goals were and were not completed. There will be one final assessment using the BAI (Beck and Steer 1993) and BDI (Beck, Steer, & Brown 1996) and BDI that will be compared to the previous assessments.

**Maintenance and Generalization**

Upon the completion of the 8 week CBT program, and feedback has been received there will be adjustments made the program. Firstly, the CBT sessions with the researcher will no longer continue and instead a Pathways counselor who is familiar with the issues and concerns of individuals with GD will assist in taking over. Secondly, the new counselor will be informed of what was worked on in each session, overall concerns of the students, and any other relevant information that may be useful for future sessions. Both the ACW and the counselor will both
have the same information at this point in order to support the client with any future needs they might have. Finally, a parting meeting with the student will take place to ensure that client feels comfortable moving forward with the new supports put in place following the researcher’s absence.

Results

The results were measured using the Becks Depression Inventory II (BDI-II) (Beck, Steer, & Brown 1996) and Becks Anxiety Inventory (BAI) (Beck and Steer 1993). Both the BAI and BDI-II were given prior to treatment as a baseline pre-test during the sixth week of placement. Upon the completion of the eight CBT sessions at the fourteenth week of placement the two inventories were than given as a post-test to determine if there was any change in the scoring on the inventories from baseline to intervention. The results of both scores on the 21 item inventories were than compared in a two tail test which examines the data to discover if there was any significant change in individual answers for each question and overall scores from pre – test to post. The inventories were used to demonstrate if the client had reduced levels of anxiety or depression as a result of the CBT treatment.

The BDI-II (Beck, Steer, & Brown 1996) was completed to determine the client’s baseline level of depression prior to treatment. The client scored a 31 on the pre-test score which considered severe depression according to the inventories scale. The post-test BDI-II (Beck, Steer, & Brown 1996) intervention score was a 30 which is considered a moderate level of depression, however only differed by 1 point when compared to the post treatment score demonstrating a lack of significant change. The baseline means on the BDI-II (Beck, Steer, & Brown 1996) for the participant were 1.47 on average for each question on the likert scale which was virtually unchanged from the 1.42 average score during intervention. The median score for the pre-test and post-test was 2. In addition, the standard deviation during baseline SD=.68 and intervention SD=. The percentage of change in behavior for depression was 3.33% which means the client experienced approx. a 3% reduction in depressive symptoms. All of the raw data previously mentioned can be found in Table 1 which directly compares the results of baseline and intervention for depression in addition to a graph of the inventories results scores in Figure 1. Overall when comparing the results of the baseline and intervention scores of the BDI-II (Beck, Steer, & Brown 1996), the scores were found to be insignificant without a substantial reduction in feelings of depression.
Table 1
Pre and Post Assessment Scores on the BDI-II (N=1)

<table>
<thead>
<tr>
<th>Pre-Treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>31 (Severe)</td>
<td>30 (Moderate)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Median: 2</th>
<th>Median: 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score: 1.47</td>
<td>Mean Score: 1.42</td>
</tr>
<tr>
<td>Standard Deviation: .68</td>
<td>Standard Deviation: .75</td>
</tr>
</tbody>
</table>

Percentage of improvement:

\[(\text{Treatment level – baseline level}) / \text{Treatment level} \times 100\]

\[= \frac{(30 - 31)}{30} \times 100\]

\[= \frac{1}{30} \times 100\]

\[= 3.33\%\]

The BAI (Beck and Steer 1993) was given to determine the client’s baseline level of anxiety prior to treatment. The client scored a 44 on the pre-test score which considered severe anxiety according to the inventories scale. The post-test BAI (Beck, Steer, & Brown 1996) intervention score was an 18 which is considered a low level of anxiety. The 26 point change from baseline to intervention is considered a significant reduction of anxiety symptoms. The baseline means on the BAI (Beck, Steer, & Brown 1996) for the participant was 2.10 on average for each question on the likert scale which changed significantly from the .86 average score during intervention. The median score for the pre-test was 2 with the post-test median being reduced by 1. The standard deviation during baseline SD=.83 and intervention SD=.79 demonstrates some symptoms of anxiety only decreased or remained the same. The lack of change in standard deviation demonstrates a lack of variance meaning the answers were consistent. The percentage of change in behavior for anxiety was 144.44\% which means the client experienced approx. a 145\% reduction in anxiety symptoms. All of the raw data previously mentioned can be found in Table 2 which directly compares the results of baseline and intervention for anxiety in addition to a graph showing the inventories results scores in Figure 2. Overall, the results of The BAI (Beck and Steer 1993) were significant with a substantial reduction in feelings of anxiety when compared from baseline to intervention.
Table 2
Pre and Post Assessment Scores on the BAI (N=1)

<table>
<thead>
<tr>
<th>Pre-Treatment</th>
<th>Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>44 (Severe)</td>
<td>18 (Low)</td>
</tr>
</tbody>
</table>

Median: 2
Mean Score: 2.10
Standard Deviation: .83

Median: 2
Mean Score: .86
Standard Deviation: .79

Percentage of Improvement:
Treatment level – baseline level / Treatment level x 100
= (44 - 18) / 18 x 100
= 26 / 18 x 100
= 144.44%

Discussion

Gender Dysphoria is a complex disorder that involves a number of factors that can impact individual’s daily emotions in various ways, including anxiety and depression. For this research paper, CBT sessions were conducted to teach the client coping techniques to reduce their anxiety and depression in order to improve his quality of life. In addition, due to the limited amount of studies on the use of CBT in treating GD, the study would also add to the research on if eight CBT sessions would be effective in treating the comorbid symptoms of anxiety and depression as a result of GD. The results displayed a significant decrease in anxiety symptoms lowering the score from a severe level to a low level of anxiety. The depression symptoms remained relatively the same from baseline to treatment meaning CBT was an unsuccessful treatment method for depression in this study. Overall, the CBT program was able to successfully support a 14 year old transitioning to high school and student transitioning from female to male, to deal with severe symptoms of anxiety and some depression symptoms.

The significant symptom reduction in anxiety appeared to largely be attributed to the coping skills taught throughout the CBT sessions along with a strong therapeutic relationship. The client previously had no experience with CBT or had any previous interaction with the researcher, which made developing rapport with the student vital in the therapeutic process. Before the initial sessions had begun, brief interactions had occurred in order to build a relationship where the client felt comfortable talking about emotional topics and where the researcher was able to explain some of the aspects of CBT that could help. After discussing what CBT had to offer with the client the focus needed to be on area’s in which caused the client the most anxiety which were social interactions and noisy settings. These two emotional triggers were easier to target once examined with a thought record exercise in order for the client to rationalize their feelings and therefore reduce some aspects of the anxiety. Furthermore, the anxiety seemed to stem mainly from unfamiliar social settings or interactions which made teaching coping skills in a school environment an essential and effective aspect of treatment. Once the client was taught through the CBT sessions how to interact and handle the noisy
settings and the interactions the anxiety appeared to reduce significantly. Lastly, the client was very open with the researcher about what they found to be working in the treatment and what comfortable for them moving forward allowing for a smooth process in dealing with the anxiety symptoms.

The lack of reduction in the client’s depression symptoms appeared to largely be a result of factors outside the client’s control. The hypothesized major causes of the depression stemmed from GD, fear of the future, lack of family support at home, and overall life purpose. This made teaching the coping skills to the much more difficult because these issues were felt by the client to be out of his control and changed from day to day. Managing the dysphonic feelings of the client one session was often very different in the other following sessions. In addition, challenging core schemas about future that were met with an increased resistance from the client. The reasoning for the resistance is hypothesized as the client believing that the cause of depression symptoms could not be improved, without the ability for them to change. Therefore, even when the skills were taught and solutions were discussed they were either not followed up on or not utilized to their full potential. In addition outside factors such as some low grades, or fights at home added to the depressive symptoms which could not have been foreseen. It should be mentioned that substance abuse was also used as a means of coping techniques without the ability for the client to receive proper medication which may have added to the lack of reduction in depressive symptoms.

There were a few of multilevel challenges that occurred throughout the study. The main challenge at the client level was the background for the student. The student had experienced a number of struggles and traumas in their past, many of which stem from the lack of support at home and inability to acquire support for GD. Currently, individuals seeking support for GD can only receive treatment after the age of 16 without consent making the treatment process begin far later than most struggling with the disorder would like to which can often result in mental health issues. With the lack of understanding many parents and organizations have on GD it can be difficult for students to get the support they need at a young age. Fortunately, Pathways counseling service was able to support the client in this situation so that they may continue to receive support otherwise might not have been available. The program challenges mainly were caused by motivating the client to work towards improving depression and the lack of individual training by the researcher to perform CBT. The researcher learned a lot throughout the program, and was able to motivate the client to combat their anxiety and improve on the CBT skills for future programs. The organizational level challenges were the slow process of initiating therapy by going through the consent procedures and ethics board before starting the program. This slow process however did allow for an effective program to be created based on research while the therapeutic relationship had time to build before the programs implantation. The process is necessary, although it slowed down the already limited time the researcher had to complete the study. The societal level poses a huge challenge with regards to a stigma towards the disorder due to lack of understanding or prejudice towards the individual. This created insecurity with the client which had an impact on self-esteem and daily living. A gender neutral washroom was created, and weekly LGBTQ meetings were held during lunch in support for those in the community to combat the stigma. An ethical issue was reporting an issue the client had mentioned about the mothers substance abuse that could have been potentially harmful to the student. The client didn’t want the information to be known by anyone else, however the
The researcher was obligated to disclose such information to the agencies supervisors’ attention and have it resolved.

The successful reduction of anxiety symptoms using CBT does demonstrate the treatments effectiveness, yet there were a number of limitations in this study that future studies could improve upon. Only having the two inventories for data collection without any other resources to compare data to, made determining the results less reliable than intended. The amount of time between the two inventories and time in which they were administered could have had a great impact on the outcome on the scores. This is hypothesized by GDs impact on anxiety and depression and can vary greatly depending on the clients current state of dysphoria. Further studies such as this should have additional measurements for results such as inventories being administered before the first session, mid-way through treatment, after treatment and a few months after to follow up in order to determine if the treatment was successful. In addition, the length of treatment would need to be longer due to the limited coverage of both anxiety and depression covered in the eight sessions time period. Adding in more homework for the client to try with a brief reflection on their success with it could also be more effective in determine which skills need to be practiced more, or which skills were found to be successful or not. Finally having a larger sample size to test the treatment on with the addition of a control group would help determine the treatments effectiveness. Future research might also look at treating GD directly with CBT using techniques specifically focused on common emotional struggles penitents with GD may struggle with. Lastly future research might also examine GD in settings other than schools, with mental issues other than anxiety and depression, and across a variety of age groups. Due to the limited research about effective treatment for GD further research is necessary for it to be fully understood. This current study is only on a single sample size, but can assist future researchers in the behavioral psychology field on understanding GD and treating comorbid symptoms using CBT.
References


Appendix A

Cognitive Behavioral Therapy for an Adolescent with Gender Dysphoria, Anxiety, and Depression.

Principal Investigator: Ryan Walsh
Name of Supervisor: Michelle Holloway BCBA
Name of Institution: St. Lawrence College
Agency: Frontenac Secondary School
Agency supervisor: Jane Martin

Invitation
Your son 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 Frontenac Secondary School. As a part of this placement, I am completing a research project (called an applied thesis) based on research and studies. 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 the information carefully and ask all the questions you might have before you decide if you want to take part.

Why is this research study being done?
The program I am developing is an intervention to help an adolescent aged 14 diagnosed with symptoms of Gender Dysphoria (GD); cope with associated symptoms such as anxiety and depression using cognitive behavioural therapy (CBT). There have been many research studies that show the effectiveness of CBT when dealing with anxiety and depression. This program will look at the application of CBT for these symptoms. CBT is a therapy that works with changing the individual’s way of thinking to reduce the thoughts that trigger the symptoms of anxiety and depression. It includes coping skills, psycho-education, relaxation techniques, and working with automatic thoughts. Through the use of CBT the hope is your son will gain a better understanding of how to manage his feelings and emotions.

What will your child need to do if he takes part?
If you allow your child to take part in the study he will be asked to meet for 30 minutes with me once a week during the last half of his first period. This timing can be changed to lunch or another preferable time if you have concerns about him missing class. He will be taking part in 8 sessions of a CBT program at Frontenac Secondary school in a private office setting. I the researcher will run the sessions alone, only after discussing the specifics of what each session will cover with my agency supervisor (the adolescent care worker) will the session take place. Upon completion of each session there will be a 10 minute debrief between myself and the agency supervisor about the sessions outcome. The sessions will involve some worksheets/assessments to measure levels of your son’s anxiety and depression and how to cope with these symptoms. Before your sons starts the program, he will be asked to fill out an inventory that will take about 15 minutes to complete in order to give us a better understanding of his level of anxiety and depression going into the program. The Inventories include The Beck Anxiety Inventories (Beck & Steer, 1993) and the Beck Depression Inventories (Beck, Steer, & Brown, 1996). Each session we will discuss his current progress and a plan moving forward along with any issues you might be having with the sessions so far. At the end of the program,
he will be asked to complete a few reflection questions that will take about 20 minutes which will address the pros and cons of the program. Lastly, a final assessment using both inventories mentioned will be used to determine whether the treatment was successful or not.

**What are the potential benefits to your child if they take part?**
This program is client based and designed to help give your son the potential effective coping techniques using cognitive behavioral therapy that has proven to help manage symptoms of depression and anxiety. In addition, it may give your son the potential to learn more about himself and his emotions in order to improve his current and future mental health.

**What are the potential disadvantages or risks of your child taking part?**
There are minimal risks; however, some may include emotional distress, feeling upset, or potentially uncomfortable as result of talking about sensitive issues.

**What happens if something goes wrong?**
Everybody is unique and may react strongly to the topics and questionnaires being discussed. If this is the case, feel free to express these concerns or if need be withdrawn from the voluntary program at any time. If the client experiences increased anxiety or depression symptoms at the end of the treatment sessions, they will be referred to a pathways counselor named Jen Britton who specializes in individuals with gender issues.

**The information you collect from me in this project be kept private?**
We will make every attempt to keep any information that identifies your son will only be able to be accessed if required by law. Locked cabinets at Frontenac Secondary School containing your information will only be able to be accessed by myself and the agency supervisor and college supervisor. 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 at Frontenac Secondary School after which they will be destroyed. All completed assessments and data will be store for six years the participant’s 18th birthday. Your son’s name or other identifiers will not be used any reports, publications, or presentations resulting from this project.

**Do you have to take part?**
Taking part is voluntary. It is up to your child to decide whether or not to take part in this research project. If your child does decide to take part, you will be asked to sign this consent form on his behalf. If you and your son do decide to take part in this research project, your son is still free to stop at any time without giving any reason and without experiencing any penalty or negative effects. If you decide to stop, please speak to me or my supervisor however you may continue to be able to use the adolescent care workers or my services if you choose to not take part.

**Contact for further information.**
This research project has received ethical clearance from the Research Ethics Committee for Behavioural Psychology (REC-P) under the authority of the St. Lawrence College Behavioural Psychology Program. The project was developed under the supervision of Michelle Holloway, my supervisor from St. Lawrence College. I appreciate your cooperation and if you have any
additional questions, feel free to ask me, RWalsh07@student@sl.on.ca. You can also contact my College Supervisor at MHolloway@sl.on.ca. If you have concerns about the way this research is being conducted or about your rights as a participant you may contact the SLC-REB Chair 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 school and in a secure location at St. Lawrence College.

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 (if any) of this study have been explained to me.
• I understand that I have 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 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.
• I hereby consent to take part.

<table>
<thead>
<tr>
<th>Participant name</th>
<th>Signature of Participant</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent/Guardian name</td>
<td>Signature of Parent/Guardian</td>
<td>Date</td>
</tr>
</tbody>
</table>
Appendix B

Roche

Beck Depression Inventory

<table>
<thead>
<tr>
<th>CRTN:</th>
<th>CRF number:</th>
<th>Page 14</th>
<th>Patient initis:</th>
</tr>
</thead>
</table>

Baseline

Date: 

Name: ____________________________ Marital Status: _______ Age: _______ Sex: _______

Occupation: ________________________ Education: ______________________

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Circle the number beside the statement you have picked. If several statements in the group seem to apply equally well, circle the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness
   0 I do not feel sad.
   1 I feel sad much of the time.
   2 I am sad all the time.
   3 I am so sad or unhappy that I can't stand it.

2. Pessimism
   0 I am not discouraged about my future.
   1 I feel more discouraged about my future than I used to be.
   2 I do not expect things to work out for me.
   3 I feel my future is hopeless and will only get worse.

3. Past Failure
   0 I do not feel like a failure.
   1 I have failed more than I should have.
   2 As I look back, I see a lot of failures.
   3 I feel I am a total failure as a person.

4. Loss of Pleasure
   0 I get as much pleasure as I ever did from the things I enjoy.
   1 I don't enjoy things as much as I used to.
   2 I get very little pleasure from the things I used to enjoy.
   3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings
   0 I don't feel particularly guilty.
   1 I feel guilty over many things I have done or should have done.
   2 I feel quite guilty most of the time.
   3 I feel guilty all of the time.

6. Punishment Feelings
   0 I don't feel I am being punished.
   1 I feel I may be punished.
   2 I expect to be punished.
   3 I feel I am being punished.

7. Self-Dislike
   0 I feel the same about myself as ever.
   1 I have lost confidence in myself.
   2 I am disappointed in myself.
   3 I dislike myself.

8. Self-Criticalness
   0 I don't criticize or blame myself more than usual.
   1 I am more critical of myself than I used to be.
   2 I criticize myself for all of my faults.
   3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes
   0 I don't have any thoughts of killing myself.
   1 I have thoughts of killing myself, but I would not carry them out.
   2 I would like to kill myself.
   3 I would kill myself if I had the chance.

10. Crying
    0 I don't cry anymore than I used to.
    1 I cry more than I used to.
    2 I cry over every little thing.
    3 I feel like crying, but I can't.
<table>
<thead>
<tr>
<th>Beck Depression Inventory</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>V 0477</td>
<td></td>
</tr>
<tr>
<td>CRTN:              CRF number:                   Page 15  patient inits:</td>
<td></td>
</tr>
</tbody>
</table>

11. Agitation
0. I am no more restless or wound up than usual.
1. I feel more restless or wound up than usual.
2. I am so restless or agitated that it’s hard to stay still.
3. I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest
0. I have lost interest in other people or activities.
1. I am less interested in other people or things than before.
2. I have lost most of my interest in other people or things.
3. It’s hard to get interested in anything.

13. Indecisiveness
0. I make decisions about as well as ever.
1. I find it more difficult to make decisions than usual.
2. I have much greater difficulty in making decisions than I used to.
3. I have trouble making any decisions.

14. Worthlessness
0. I do not feel I am worthless.
1. I don’t consider myself as worthwhile and useful as I used to.
2. I feel more worthless as compared to other people.
3. I feel utterly worthless.

15. Loss of Energy
0. I have as much energy as ever.
1. I have less energy than I used to have.
2. I don’t have enough energy to do very much.
3. I don’t have enough energy to do anything.

16. Changes in Sleeping Pattern
0. I have not experienced any change in my sleeping pattern.
1a. I sleep somewhat more than usual.
1b. I sleep somewhat less than usual.
2a. I sleep a lot more than usual.
2b. I sleep a lot less than usual.
3a. I sleep most of the day.
3b. I wake up 1-2 hours early and can’t get back to sleep.

17. Irritability
0. I am no more irritable than usual.
1. I am more irritable than usual.
2. I am much more irritable than usual.
3. I am irritable all the time.

18. Changes in Appetite
0. I have not experienced any change in my appetite.
1a. My appetite is somewhat less than usual.
1b. My appetite is somewhat greater than usual.
2a. My appetite is much less than before.
2b. My appetite is much greater than usual.
3a. I have no appetite at all.
3b. I crave food all the time.

19. Concentration Difficulty
0. I can concentrate as well as ever.
1. I can’t concentrate as well as usual.
2. It’s hard to keep my mind on anything for very long.
3. I find I can’t concentrate on anything.

20. Tiredness or Fatigue
0. I am no more tired or fatigued than usual.
1. I get more tired or fatigued more easily than usual.
2. I am too tired or fatigued to do a lot of the things I used to do.
3. I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex
0. I have not noticed any recent change in my interest in sex.
1. I am less interested in sex than I used to be.
2. I am much less interested in sex now.
3. I have lost interest in sex completely.
Appendix C
Beck Anxiety Inventory

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Not At All</th>
<th>Mildly but it didn’t bother me much.</th>
<th>Moderately - it wasn’t pleasant at times</th>
<th>Severely – it bothered me a lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbness or tingling</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling hot</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Wobbliness in legs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unable to relax</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fear of worst happening</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Dizzy or lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Heart pounding/racing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Terrified or afraid</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Nervous</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling of choking</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Hands trembling</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Shaky / unsteady</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fear of losing control</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Difficulty in breathing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Fear of dying</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Scared</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Indigestion</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Faint / lightheaded</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Face flushed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Hot/cold sweats</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

**Column Sum**

**Scoring** - Sum each column. Then sum the column totals to achieve a grand score. Write that score here ____________ .
Interpretation

A grand sum between 0 – 21 indicates very low anxiety. That is usually a good thing. However, it is possible that you might be unrealistic in either your assessment which would be denial or that you have learned to “mask” the symptoms commonly associated with anxiety. Too little “anxiety” could indicate that you are detached from yourself, others, or your environment.

A grand sum between 22 – 35 indicates moderate anxiety. Your body is trying to tell you something. Look for patterns as to when and why you experience the symptoms described above. For example, if it occurs prior to public speaking and your job requires a lot of presentations you may want to find ways to calm yourself before speaking or let others do some of the presentations. You may have some conflict issues that need to be resolved. Clearly, it is not “panic” time but you want to find ways to manage the stress you feel.

A grand sum that exceeds 36 is a potential cause for concern. Again, look for patterns or times when you tend to feel the symptoms you have circled. Persistent and high anxiety is not a sign of personal weakness or failure. It is, however, something that needs to be proactively treated or there could be significant impacts to you mentally and physically. You may want to consult a counselor if the feelings persist.
### Appendix D

#### Case Formulation

<table>
<thead>
<tr>
<th>Relevant Childhood Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance abuse, Gender identity issues, Anxiety/Depression, Trauma, Difficult relationship with parents whom are divorced.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Core Beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overthinking (logic based thinking in order to make sense of situations)</td>
</tr>
<tr>
<td>I don’t want to end up like my parents.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Conditional Assumptions I Attitudes I Rules (If ...then ...)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paranoia (If I go here than something bad is going to happen to me.</td>
</tr>
<tr>
<td>Self-aware (If I am aware of the bad feeling in situations I can avoid or change it.)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Coping Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smoking weed or Cigarettes, Coffee, Alcohol.</td>
</tr>
<tr>
<td>Escape (Not attending events or activities)</td>
</tr>
<tr>
<td>Keep moving (productive)</td>
</tr>
<tr>
<td>Lying in bed and taking 10 minute breaks.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Situation</th>
<th>Situation</th>
<th>Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Event</td>
<td>Physical Contact</td>
<td>In a situation out of my control</td>
</tr>
<tr>
<td>Automatic thought</td>
<td>Automatic thought</td>
<td>Automatic thought</td>
</tr>
<tr>
<td>“Something will go wrong.”</td>
<td>They are a threat (makes me uncomfortable)</td>
<td>“I have no control, Therefore something with go wrong”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meaning of Automatic Thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paranoia about the many bad possibilities</td>
</tr>
<tr>
<td>“It is a surprise, don’t know what is going to come”</td>
</tr>
<tr>
<td>Can’t do anything to prevent a bad situation from happening.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panic, Stress, Worry, Nauseous.</td>
</tr>
<tr>
<td>Fear, Scared</td>
</tr>
<tr>
<td>Sad, frustrated, anxious</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escape, Smoke, 10min break.</td>
</tr>
<tr>
<td>Distance self, Avoid situation/People.</td>
</tr>
<tr>
<td>Lay in bed, Try to change it, Substance abuse.</td>
</tr>
<tr>
<td>Emotion or feeling</td>
</tr>
<tr>
<td>--------------------</td>
</tr>
<tr>
<td>Anticipation 50%</td>
</tr>
<tr>
<td>Fear 30%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternative thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>My teachers will support me</td>
</tr>
<tr>
<td>Will this matter in a few years.</td>
</tr>
<tr>
<td>I have more control than I think.</td>
</tr>
<tr>
<td>I just need to get started and it will be okay.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evidence that does not support the thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have asked for support before and I normally get it.</td>
</tr>
<tr>
<td>I don't often fail in class</td>
</tr>
<tr>
<td>My parents have done things to help me out in the past.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evidence that supports the thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>General bad feeling about the teacher and how they will treat me because I have been right</td>
</tr>
<tr>
<td>Failure in class before makes me feel as though I will let them down.</td>
</tr>
<tr>
<td>I have asked my parents for help in the past and they have not supported me.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Negative automatic thought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Something will go wrong.</td>
</tr>
<tr>
<td>I will disappoint someone.</td>
</tr>
<tr>
<td>I will fail and need to fix things.</td>
</tr>
<tr>
<td>I don't want to ask for help.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Emotion or feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipation 85%</td>
</tr>
<tr>
<td>Paranoia 90%</td>
</tr>
<tr>
<td>Fear 60%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Where were you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noisy Setting</td>
</tr>
<tr>
<td>Social Interactions</td>
</tr>
</tbody>
</table>

Appendix G
<table>
<thead>
<tr>
<th>Where were you?</th>
<th>Emotion or feeling</th>
<th>Negative automatic thought</th>
<th>Evidence that supports the thought</th>
<th>Evidence that does not support the thought</th>
<th>Alternative thought</th>
<th>Emotion or feeling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Dysphoria (not getting treatment).</td>
<td>Dread 85%</td>
<td>Will others see me as normal. I am fine by myself will I ever find purpose.</td>
<td>My voice / physical traits may cause others to look at me differently or as a girl. I have made it this far pretty much on my own. I have found my life purpose and I am struggling to find one.</td>
<td>There have been those that meet me and accept me for who I am. I have needed help from others along the way. I am only 14 years old I have more time to find purpose.</td>
<td>There are people who will accept and support me. Things will hopefully get better. I will be okay one day, look how far I have come.</td>
<td>Dread 50%</td>
</tr>
<tr>
<td>Fear of what will happen in the future.</td>
<td>Scared 60%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Comfort 50%</td>
</tr>
<tr>
<td>Lack of support from parents.</td>
<td>Boredom 75%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Scared 40%</td>
</tr>
<tr>
<td>Life purpose</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Relief 60%</td>
</tr>
</tbody>
</table>

**CBT Thought Record (Depression)**

**Evidence that does not support the thought:**
- There have been those that rejected me and even pretended I didn’t exist.
- People have been unkind and hurtful to me.
- I have not been able to find a purpose.
- I have not had the courage to seek help.

**Evidence that supports the thought:**
- My voice / physical traits may cause others to look at me differently or as a girl.
- I have found my life purpose and I am struggling to find one.
- I have made it this far pretty much on my own.
- I have needed help from others along the way.

**Alternative thought:**
- There are people who will accept and support me.
- Things will hopefully get better.
- I will be okay one day, look how far I have come.

**Emotion or feeling:**
- Dread 85%
- Comfort 50%
- Scared 40%
- Relief 60%
- Boredom 60%
- At ease 40%
## Appendix G

### Daily Activity Diary

<table>
<thead>
<tr>
<th>1-10 Enjoyment Rating</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
<th>Sunday</th>
</tr>
</thead>
<tbody>
<tr>
<td>9am to 10am</td>
<td>English (3) 10min Break (4)</td>
<td>English (3) 10min Break (4)</td>
<td>English (3) 10min Break (4)</td>
<td>English (3) 10min Break (4)</td>
<td>English (3) 10min Break (4)</td>
<td>English (3) 10min Break (4)</td>
<td></td>
</tr>
<tr>
<td>10am to 11am</td>
<td>Geography (6)</td>
<td>Geography (6)</td>
<td>Geography (6)</td>
<td>Geography (6)</td>
<td>Geography (6)</td>
<td>Wake up (7)</td>
<td>Wake up (7)</td>
</tr>
<tr>
<td>12 to 1</td>
<td>French (3)</td>
<td>French (3)</td>
<td>French (3)</td>
<td>French (3)</td>
<td>French (3)</td>
<td>Hang out with Friends (8)</td>
<td>Hangout and watch youtube (7)</td>
</tr>
<tr>
<td>2 to 3</td>
<td>Going Home (9)</td>
<td>Going Home (9)</td>
<td>Going Home to moms (5)</td>
<td>Going Home (9)</td>
<td>Going Home (9)</td>
<td>Hang out with Friends (8)</td>
<td>Hangout and watch youtube (7)</td>
</tr>
<tr>
<td>3 to 4</td>
<td>Snack and TV (7)</td>
<td>Snack and TV (7)</td>
<td>Seeing Siblings (5)</td>
<td>Hang out with Friends (8)</td>
<td>Homework (2)</td>
<td>Hang out with Friends (8)</td>
<td>Homework (2)</td>
</tr>
<tr>
<td>4 to 5</td>
<td>Snack and TV (7)</td>
<td>Drumming Practice (8)</td>
<td>Seeing Siblings (5)</td>
<td>Homework (2)</td>
<td>Hang out with Friends (8)</td>
<td>Dinner with dad (6)</td>
<td>Dinner with dad (6)</td>
</tr>
<tr>
<td>5 to 6</td>
<td>Dinner with dad (6)</td>
<td>Dinner with dad (6)</td>
<td>Dinner with mom (3)</td>
<td>Hang out with Friends (8)</td>
<td>Dinner</td>
<td>Watch Netflix (8)</td>
<td>Watch Netflix (8)</td>
</tr>
<tr>
<td>8 to 9</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
</tr>
<tr>
<td>9 to 10</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
<td>Sleep (10)</td>
</tr>
<tr>
<td>10 to 12am</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix H

Figure 1
Pre and Post Assessment Scores on the BDI-II (N=1)

Figure 2
Pre and Post Assessment Scores on the BAI (N=1)